The Lumleian Lectures
ON
THE SEQUELS OF DISEASES.

Delivered before the Royal College of Physicians of London

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LECTURE I.[1]

Delivered on March 19th, 1896.

MR. PRESIDENT AND GENTLEMEN,—Three hundred and fifteen years ago Dr. Richard Caldwell (a former President of this College) and Lord Lumley obtained leave of Queen Elizabeth to found a Surgical Lectureship in this College.[2] They endowed it in perpetuity with the sum of £40 per annum, one-half of which was charged on Lord Lumley's estates in Sussex, the other on Dr. Caldwell's properties in Derbyshire. The lecturers were at first appointed for life. One who so held the office was the illustrious Harvey, who was instituted to it 280 years ago, and who, with some intermissions, was Lumleian Lecturer for forty years. He resigned the position in 1656, when, owing to failing health, he formally took his leave of the College, and handed over the title-deeds of his patrimonial estate at Burmarsh for its benefit. It was in his capacity of Lumleian Lecturer that he gradually promulgated and demonstrated his original researches upon the circulation of the blood. It is of interest to find that our College is indebted to Harvey, as Dr. Munk tells us, for enforcing by expensive legal proceedings the due payment of the lecturer's salary from the heirs of Lord Lumley. In 1640 he sought permission from the College to sue for the unpaid rent-charge, which was granted. Harvey's absence from London with the king and the political disturbances of the period probably prevented his carrying out this object. Harvey had been treasurer of the College from 1628–1629 and knew all about its finances (such as they were in those days), and thus the College accounts must have been getting into disorder, while he himself was receiving no stipend for his lectureship. He returned to the charge, however, in 1647, having again sought permission to sue for what was due. It is sad to learn that after expending at least £500 in various law-suits, lasting over ten years, to secure what was right, the matter was not effectually settled till some time after his death, and only then at the expense of his friend and executor, Sir Charles Scarburgh, to whom he transferred this lectureship, and also bequeathed his velvet gown and "silver instruments of surgerie." The College will, I feel sure, gladly learn that, as the treasurer of to-day, I find no difficulty in securing punctual payments of the several small rent-charges due under the Lumley Trust to its chest. A Lumleian Lecturer may be pardoned if he seeks in ever so small a way to commemorate some of his predecessors in the office, but I will intrude no further on your patience than by reminding you merely of the names of such men as Peter Mere Latham, Thomas Watson, Richard Bright, Thomas Mayo, James Copland, Alexander Tweedie, and George Burrows, not to mention those of men now happily still with us who have stood in this place and by their prelections shed light on many difficult problems in physic.

Although it was clearly the intention of the founders of these lectures that some surgical subject should be discussed by the lecturer, we have evidence that very shortly after their institution there was but a scanty attendance at "the chirurgical lectures." Harvey's discourses, doubtless, proved more attractive some thirty years afterwards, and were mainly anatomical and physiological. Early in the eighteenth century the lectures appear to have become strictly medical or on subjects coming distinctly within the province of the physician. The reason for this is, I think, quite obvious. Cheselden and Percivall Pott were at work at this time, and John Hunter, the pupil of the latter, was soon to make his name famous. Our sister college was about to get a new charter and foster the labours of Hunter and his brilliant pupils. The physicians were no longer to teach anatomy to surgeons. Medicine and surgery were henceforth, as Abernethy expressed it, "one and indivisible." If that was recognised as a fact in the last quarter of the eighteenth century, what shall we say of it now in the declining years of the nineteenth? I feel sure that nowhere will it be more certainly affirmed than in this place, and approved by such an auditory as is now present, that the triumphs of modern surgery command the admiration and the warmest appreciation of the best clinical physicians. The advances of surgery have in the best interests of our patients compelled our attention to them, and it may be fairly affirmed that this has been done in no grudging spirit, for we work happily and harmoniously together with surgeons for the welfare of humanity. The natural course of events in the progress and evolution of the sciences on which our art depends has, therefore, led your Lumleian Lecturers to select for many years past subjects for their discourses which come more especially under the cognisance of the physician. Four years ago my predecessor[3] in this course of lectures took for his subject the Ætiology of Disease, considered from a modern standpoint. It appears now desirable to review our knowledge as to the sequels of diseases from a similar position. I could wish it were in my power to bring before you an exposition of these chapters of pathology with something of the erudition and lucidity which characterised the lecturer of 1892.

I propose, then, in this course of lectures to discuss as fully as I can the subject of the Sequels of Diseases. Our knowledge of this is far from anything like completeness; indeed, it may be said to be very small and most inadequate, yet it is a very large subject and it has never, so far as I am aware, been made one of systematic study. It was a saying of one of our most distinguished Fellows, the late Dr. William Baly, whose early death was the gravest loss to my own hospital, to this College, and to the whole profession in England, a saying treasured up in the writings of his colleague, Sir James Paget, that, in his opinion, one of the most useful books that might be written would be one on the diseases of convalescence. That opinion was uttered some five-and-thirty years ago, but in the meantime no such book has gone through the press. It may, however, now be truly affirmed that within this period large additions have been made to our knowledge of the sequels of disease. We are in a better position to review the whole subject, better equipped than were those of a generation back to speak with certainty on some of the problems involved, and thus able to traverse the opinions then put forth, and to test them by the light of modern researches which have been, and continue to be, so remarkable, so fruitful, and so noteworthy. The field for observation and exact determination in the direction I now set out upon is indeed immense, so large that the experience of no one amongst us is, or ever can be, adequate for the purpose in view, and we may therefore ask at the outset, "Who is sufficient for these things?" I can only hope, then, to try to map out the large field before me somewhat in the fashion of an explorer in a new territory. Many gaps and many tracts will be left blank on the chart. Others will come after and fill in these spaces in the dark country with better purpose and more lucid delineation. But it is, indeed, time that something were provisionally attempted and definitely laid down. The first difficulty which besets the inquirer into this subject is to determine and define what constitutes a veritable sequel in the case of any disease. This difficulty grows greater as modern research throws more light upon etiology and the intimate nature of morbid processes. What the physicians of half a century ago deemed to be sequels of disease must now be

[1] Lectures II. and III. were delivered on March 24th and 26th.

[2] Dr. Church, in his Harveian Oration last year, signalised Dr. Caldwell and Lord Lumley as amongst the foremost of the benefactors of this College. He endeavoured, without success, to discover the nature of the connexion between them. He noted that Lord Lumley succeeded his father, Lord Arundel, as High Steward of the University of Oxford in 1568. He was the seventh Baron, and succeeded his grandfather George Lumley. His own father suffered death for high treason in the ninth year of the reign of Henry VIII. He was made a Knight of the Bath. He was a fellow-commoner of Queen's College, Cambridge, died in 1609, and was buried in the chancel of the church at Cheam (*vide* Appendix, p. 55, of Dr. Church's Oration). Holinshed speaks of Caldwell as "the English Hippocrates and Galen." He was a Fellow of Brasenose and Senior Student of Christchurch, Oxford, and President of this College in 1570. Caius succeeded him for a third term of office in 1571.

[3] Dr. Pye-Smith.

regarded by us, in not a few instances, as but later evolutional manifestations of the primary and original *quid-quid irritans*. Such consequences may occur early or very late, and yet may be certainly referred to the noxious elements which originally broke in and disturbed the health of the individual. In such instances I take it that we must regard the particular consequence as a veritable sequel, although we do not regard it from the patient's point of view as a new malady. We shall find that many of the disorders of convalescence fall into the category I have just indicated. The early physicians recognised the occurrence of some sequels of diseases, though but little is to be found bearing on the subject in their writings. It is certain, for instance, that Hippocrates was familiar with orchitis as an early and a late consequence of parotitis, since he described the condition at some length in the "Epidemics." Aretæus noted that gout passed into dropsy and sometimes into asthma.[4] Seventy years ago the subject attracted much attention from Graves, who in his chapter on Fever described several sequels, and especially the occurrence of white leg or venous thrombosis.[5] About the same time Dr. Caleb Hillier Parry of Bath, a Licentiate of this College, was near to describing sequels of diseases in his interesting books on the "Elements of Pathology and Therapeutics," especially in his chapter on the Relation of Diseases by Conversion, wherein he embodies a series of careful observations made upon patients many of whose symptoms were then really inscrutable to him, although they were believed to be due to increased determination of blood, his universal doctrine, but of which some admit now of very clear interpretation. Thus we meet with accounts of "cases of pleurisy which gave way to immediate and fatal diseases of the head, of which one case was proved by the dissection to have arisen from inflammation and albuminous effusion above the pia mater." Here we have without doubt a case of tuberculous pleurisy to which tuberculous meningitis was a sequel. In another case he tells of hæmorrhage from the kidneys immediately succeeding the desquamation of measles. We can hardly doubt that this was an example of glomerular nephritis following not measles but scarlet fever. Amongst these observations are many remarkable instances of metastasis of gout, of which, I venture to believe, we now see fewer examples than did the physicians of the eighteenth century. To mention but one, the frequency of erysipelas in Parry's time as a precursor and a sequel of gout is certainly not recognised in these days. (James Gregory of Edinburgh noted the frequency of facial erysipelas in the daughters of gouty men.) Caleb Hillier Parry was a great physician, and it is not sufficiently known that he anticipated Graves in the recognition of exophthalmic goitre, and was possibly the first to describe the visual phenomena of megrim known as teichopsia, a fact which has been fully set out in his learned work on "Hemicrania" by our present registrar.

The ordinary conception of a sequel is the occurrence, sooner or later, after recovery from an illness is seemingly established, of new symptoms and physical signs of disease either near to, or remote from, parts which had been the seat of disturbance in the original malady. Some of these have long been recognised, and little surprise is felt when they supervene, though we may never have been able to predict their certain onset. Amongst such may be mentioned the occurrence of various palsies after diphtheria, and of rheumatism with cardiac complications after scarlet fever. However we may explain these they are true sequels, albeit they may be inconstant and only ensue in a proportion of cases of these disorders. Throughout our present inquiry we shall do well to bear in mind the following apophthegm of Sir William Jenner to the effect that "the invariable antecedent of any given event is not necessarily its cause. Invariable antecedent and invariable consequent are not synonymous with cause and effect." I shall endeavour to find a reply to the very pertinent inquiry which Sir James Paget has suggested, whether each disease does not leave after it has ceased certain conditions of blood or structure which sooner or later may manifest themselves in what may be named a residual disease. He remarks that of the soon-occurring sequels of disease we know many; of the later comparatively few. We shall find that our knowledge of the later sequels has been enlarged within quite recent date, especially in regard to the large class of specific and infectious diseases. The question relating to latency of such peccant matters as may sometimes after very long intervals be roused into activity and afford characteristic signs is one of large interest and receiving some attention at the present time. We have to determine what are the limits of duration of latency, and in any given instance to prove, if possible, that these specific and toxic residues have remained latent and have not been reintroduced from without. We have to learn what conditions of the tissues and of the blood dispose to, and determine, latency, and, further, to ascertain in what forms, particulate or other, germs or toxines remain latent within the body. We must look almost exclusively to the pathological laboratories for replies to most of these pressing inquiries. Such investigations call for the highest skill and experience from workers widely trained in animal chemistry no less than in bacteriology, for they are beset with many pitfalls which are alone known to skilled observers. The physician who is conversant with the attested results of these researches is indeed well equipped when he comes to his work at the bedside.

We have next to consider the occurrence of new morbid conditions which appear to be determined by the previous incidence of definite disease. An example of this is perhaps afforded by the onset of the malady known as tabes dorsalis, which is now recognised as a not infrequent sequel in the subjects of constitutional syphilis. It is found that in the subjects of tabes dorsalis syphilis figures to the extent of over 80 per cent., and it is hardly possible to believe that this far-reaching infection is not answerable for a very large proportion of cases of tabes. We cannot assign the specific spinal and cerebral lesions of this latter malady to any definite forms of syphiloma, neither morbid histology nor therapeusis affording any proof in support of such a contention; hence we are constrained to believe that the blighting influences of the infection of lues in some way predispose the subjects of it to subsequent specific degenerations in certain tracts of the spinal marrow, and thus we have to regard tabes dorsalis as one of the possible sequels of syphilis. One of our present Censors,[6] pre-eminent for minute scrutiny and little ready to be satisfied with specious arguments, has declared in respect of this very question that possibly as large a percentage of syphilis might be discoverable were it looked for amongst the unhappy subjects of broken limbs in any surgical wards. This may be the case, but I hardly see that it materially affects the proposition before us, and I think great force is added to the contention by the fact that when women who are rarely the subjects of tabes dorsalis suffer from it they have frequently at an earlier period been the victims of constitutional syphilis. (I may add the authority of Dr. Buzzard for the latter statement.) We shall find as we proceed how certain illnesses, as it were, test the constitution of the patient and bring to light some phase or indication of his peculiar diathesis or habit of body, and this it may be for the first time in his life-history. In this way scrofulous manifestations may supervene upon enteric or upon scarlet fever, and gout or disorders of gouty nature may come out after fevers or prolonged illnesses, neither tendency having previously been suspected. Such developments may fairly be regarded as sequels of the original ailments that primarily evoked them, for they might possibly never have been manifested or have remained dormant till otherwise called into activity later in life.

The study of convalescence from acute diseases is in itself a very large one. Our daily experience tells of the great differences to be met with in the rate and course of recovery from illnesses, differences attributable in each case to the age, life-history, diathetic predisposition, and the special environments of the patient. Sometimes one's greatest anxieties respecting ultimate recovery only begin when the acute processes have subsided and the patient has to be restored to his original level of nutrition and well-being. Especially is this the case after such illnesses as pneumonia or enteric fever, more particularly in elderly patients; and our surgical colleagues can bear witness to similar anxiety in cases where the powers of life are well-nigh exhausted in the inadequate healing of large wounds and in the often protracted convalescence from chronic pyæmia.

In order that an inquiry may be as complete as possible it appears to me necessary to consider *seriatim* diseases as

[4] Περὶ αἰτίων καὶ σημείων χρονίων παθῶν. βιβλ. Β. Περὶ Αρθρίτιδος καὶ Ισχιάδος.

[5] Clinical Medicine, reprint from second edition, p. 195, 1864.

[6] P. H. Pye-Smith: Lumleian Lectures, 1892, p. 106. Dr. Pye-Smith, however, admits that the frequency of the association of lues and tabes is greater than can be explained by coincidence.

they affect the several systems and organs of the body, and to discover as we thus proceed what we know for certain in respect of any near or remote consequences which may arise from them. This may at first sight appear a somewhat tedious process, but it will prevent desultoriness and, presumably, some omissions. I take first, then, for consideration the large class of specific contagious diseases. We shall find that these, as might be expected, furnish many, indeed, the greater number of examples of sequels, some of which are well recognised, others less so. I shall not refer at any length to complications which have little concern for us in this inquiry. Our knowledge respecting this part of our subject has been greatly enlarged in recent years, especially in relation to sequels involving the cerebro-spinal system. We have to determine the causes of these, to discover if the sequels are as specific as the diseases which induced them in each case. We require knowledge as to the fact that sequels are inconstant, and, happily, form no ordinary part of the illness in the majority of cases. We are already in a position to affirm that the toxines resulting from specific organisms are the active agents in inducing certain sequels, often at distant periods from the original illness which provoked them, and we have also evidence in proof of the fact that many of the later septical complications of specific diseases are dependent on the additional invasion of micro-organisms quite indirectly related to the original disease.

TYPHUS FEVER.

Typhus fever is now happily so infrequent that we have seldom means of studying it or its consequences. I myself have seen little of this disease in the last five-and-twenty years, but I was once familiar enough with it. The sequels of this malady are neither frequent nor numerous. Thrombosis may occur, leading to cerebral embolism and to arterial plugging in the limbs, with consecutive gangrene. Endocarditis was observed by Murchison in one case, leading to splenic infarction. Thrombosis of the femoral veins is not met with nearly so frequently as in cases of enteric fever. Tuberculosis also is less common after typhus fever than after enteric fever, but the depressed nutrition of the body following typhus fever certainly predisposes to an outbreak of tuberculosis in persons constitutionally predisposed to it or who may already be the subjects of it in a quiescent condition. Murchison described a case where symptoms occurred which would now be referred to peripheral neuritis, leading to various palsies of motion and sensation and a remarkably infrequent action of the heart, which latter condition remained for many years. The paralytic symptoms disappeared and the general health was restored. Peripheral neuritis probably accounts for most of the paralytic conditions noted by the older physicians as occasional sequels of typhus fever. Muscular atrophy, leading to club-foot and other distortions, may be met with and remain for the rest of life. Mania is occasionally seen as a sequel, but is generally recovered from. Whenever symptoms of mental alienation are witnessed as sequels to acute diseases my opinion is that there is always in such cases a neurotic proclivity and an inherited mental instability which thus declares itself under the lowered vital condition of the patient. I have seldom failed to find evidence in support of this view after full inquiry into the family history. Acute nephritis has been known to occur and lead to chronic tubal nephritis, but this is exceptional. Optic neuritis is rarely met with.

Peritonitis was noted once, if not twice, by Jenner during convalescence from typhus fever, and no cause being found for it after death, such as perforation of the bowel, he regarded it as idiopathic. This is so rare a sequel that the case is very noteworthy. It occurred in a girl sixteen years of age on the fifth day after the fever had passed away, began suddenly, and was accompanied by all the symptoms indicating perforation of the bowel. Death followed in two days.

Typhus fever is a grave malady for persons of a gouty habit. Murchison never knew of recovery in such a case.[7]

RELAPSING, FAMINE, OR SPIRILLUM FEVER.

The sequels that have been noted after this disease appear to be largely dependent on the previous low health of the patients. Anæmia and feeble action of the heart have been noted, accompanied by palpitation and characteristic murmurs. Muscular and arthritic pains, partial paralyses of the deltoid muscles and those of the arms, with numbness, have been recorded as lasting for several weeks. These pass away with the full establishment of convalescence. It is not improbable that these paralytic symptoms are due to peripheral neuritis. Ophthalmia is a peculiar sequel. It has been observed to begin from three weeks to eight months after the fever has subsided. Muscæ volitantes are complained of, and luminous stars. This is described as the amaurotic stage. After an interval of weeks or months, the retina becomes inflamed, and this process generally involves the other structures of the eyeball. The conjunctivæ are little affected, but there are great pain and lachrymation. The course of this disease is tedious and the sight may be lost. One eye alone is commonly involved, chiefly the right. Two months may elapse before this ophthalmia subsides. It is rarely met with after middle life. Exposure to cold appears to be the exciting cause and the extreme debility of the patients has, no doubt, much to do with it. This peculiar trouble is not met with after typhus fever or enteric fever. Erysipelas is noted amongst sequels of relapsing fever and may prove fatal. Boils sometimes occur during convalescence. Inflammatory effusion into the joints of the knees, hands, and jaw may occur. Dysentery after convalescence has sometimes proved severe and even fatal. Pregnant women invariably abort and the child is born dead or soon dies. (Abortion is rare in typhus fever, and if it happens the child usually lives.) Severe or fatal hæmorrhage is the rule in abortion after relapsing fever. The spleen may remain enlarged during convalescence. Œdema of the lower limbs is an occasional sequel and appears to be independent of any venous thrombosis, and therefore due to debility and impoverished blood. In reviewing this series of sequels it is not at present possible to connect any of them directly with the presence of the spirochæta Obermeieri in the blood. We can hardly doubt that some of them are due to this specific bacterium in some stages of its development or dissolution, or to certain toxines produced by it. It is certain that a low level of health induced by privation and insanitary conditions directly predisposes persons so exposed to fall victims to the disease in its gravest forms.

ENTERIC FEVER.

The sequels of this disease are numerous and varied. They are now commonly recognised.[8] I will consider them in the order in which they most frequently occur.

Phlebitis is perhaps most often met with, and the left femoral vein is the commonest site of it. It is of more frequent occurrence in this disease than in typhus fever. Symptoms pointing to this condition may arise as early as in the third week of the fever, or in the fourth week. In such cases we are hardly justified in reckoning it as a sequel; rather it should be considered a complication. In a prolonged case under the care of my colleague, Dr. Church, phlebitis set in on the fifty-fifth day in both legs, and prevented the patient from rising till the sixty-ninth day of the illness. As a rule, the sequels of enteric fever are met with when convalescence is fairly well or apparently completely established. Phlebitis is certainly amongst the earliest sequels, and hardly gives rise to constitutional disturbance. The process may be accompanied with severe pain in the site of it or it may be painless. Pain may be also present or absent in phlebitis dependent on other conditions such as gout or anæmia. The duration of phlebitis varies, and the effects likewise. Complete recovery is the rule, but there may remain permanent obstruction of the affected vein with compensatory enlargements of adjacent ones, and some inability in the limb, with tendency to slight œdema for the remainder of life. There is sometimes reason to suspect that some of the pelvic veins are involved in this condition, though no very clear physical signs of it may be detectable. Suppurations do not result from post-enteric phlebitis, nor are instances on record, so far as I am aware, where any detached particles of clot have been embolically lodged elsewhere in the body, though the possibility of such an accident should not be forgotten. Paget regards the thrombosis as secondary to the inflammation of the

[7] Vide Duckworth on Gout, p. 208, 1890.

[8] *Vide* Sir J. Paget: Clinical Lectures and Essays (1875), p. 395; and Studies of Old Case Books (1891), p. 98. Dr. C. Murchison: Treatise on Continued Fevers (1873), second edition. Dr. T. W. Shore: Case of Muscular Atrophy and Gangrene of the Lung after Typhoid Fever.—St. Bartholomew's Hospital Reports, vol. xxiii., p. 109, 1887, with admirable bibliographical notes. Dr. H. Handford: Nervous Sequelæ of Infectious Disease.—Brit. Med. Jour., Sept. 21st, 1895, p. 702. Dr. W. R. Gowers: Manual of Diseases of the Nervous System, vol. ii., 1895, p. 895, second edition. Dr. W. Osler: Report on Typhoid Fever; Studies in Typhoid Fever, &c.; and Neuritis during and after Typhoid Fever.—Johns Hopkins Hospital Reports, vol. v., 1895.

coats of the vein. Bradycardia sometimes remains after convalescence.

Arterial plugging is an occasional trouble, hardly to be reckoned as a sequel, since it is rather a late complication. The femoral artery is most often affected, and gangrene rapidly ensues. The condition is that of thrombosis and not of embolism, and in most cases a fatal result ensues. Osler records a case in which the left femoral artery was blocked on the 16th day of the fever. In a case recently under the care of my colleague, Dr. Hensley, in St. Bartholomew's Hospital, there was pain in the right foot with coldness and asphyxia, and absence of pulsation in the femoral artery on the forty-seventh day, continued fever having been present without any relapse in a young woman of twenty-one years. The heart sounds were clear but feeble, and the first one reduplicated.

Periostitis and perichondritis are sequels which may present themselves at periods long after convalescence is well established. Old fistulous openings may show signs of activity, and lead to areas of subjacent necrosed bone. Simple periostitis may occur without any necrosis of bone. The common site is the tibia. Both tibiæ may be symmetrically affected, but this is rarely the case. The disorder may occur within a month of full convalescence. I met with three examples in five years amongst my hospital in-patients. In one case, seen in private practice, three months had elapsed before this trouble came on. In another case periostitis occurred before convalescence was complete. The femur, ulna, ribs and cartilages, and the parietal bones have been noted as liable to be affected. Nodose swellings, with heat and pain, are generally first recognised. These often subside but may break down, and dead bone is to be felt with a probe. Long periods may elapse before a necrosed lamina is expelled, and tedious suppurative discharge may be expected until this separation is effected. The trouble is generally more tedious when a rib with its cartilage is involved, and a year, or even two years, may pass before all becomes quiet. The bones are not deeply involved as a rule. This sequel may occur in persons whose constitution has been, and still remains sound, and it does not appear that this condition betokens any evidence of scrofula, although when a rib is involved the likeness of the disorders to ordinary scrofulous periostitis is, according to Paget, singularly close. The latter authority has described a case in which the eleventh or twelfth rib being involved, a great abscess made its way between the abdominal muscles and had to be opened in the groin. In one case which came under my care the patient, a man aged twenty eight years, had enteric fever in August, 1892, while serving in India. Five weeks after convalescence an abscess formed near the sternum over the cartilages of the left fifth and sixth ribs. Mr. Howard Marsh undertook the surgical treatment of the case. The general health was excellent, but the local trouble proved most tedious. An abscess was found behind the rib in front of the parietal pleura. The sinuses in connexion with it, and the indurated swellings of the cartilages were long in healing, and the parts were not fully sound till after the lapse of two months. Most bone lesions occur within two years after the original attack of fever. Deep scars usually remain. Necrosis of the ribs is met with sometimes, but is less frequent here than in the tibiæ. The periosteum may long remain inflamed. Paget records an instance where repeated attacks of pain and swelling occurred without suppuration for three years. Permanent thickening of the periosteum remained. In another case he met with a recurrence of periostitis after nine years of apparent soundness. Men suffer more than women from post-typhoid bone lesions, probably owing to exposure to injuries and strains. The cartilages of the larynx may become necrosed, also the arytenoid cartilages. The latter have been found thus involved and accompanied with an abscess in post-mortem examination, and therefore this trouble may not perhaps be regarded as a true sequel. They may lead to general emphysema. The larynx may be affected directly by a specific ulcer which is not infrequent on the vocal cords or on the epiglottis.[9]

Phlegmonous cellulitis of the orbit has been observed as a sequel, also orchitis followed by epididymitis, suppurative parotitis, ovaritis, salpingitis, and suppurative thyroiditis. Various affections of joints have been described as sequels. Chantemesse, of Paris, who has very fully studied this subject, tells of a case of hypertrophic osteo-arthritis which ensued two and a half years after an attack of enteric fever.[10] The small joints of the hand and feet and of the cervical spine may be affected. These cases are rarely seen in Great Britain. They must be distinguished from pyæmic arthritis, which sometimes occurs at the end of a case of enteric fever which merges into a general pyæmia due to other microbic invasions than those of the specific bacillus of Eberth. The cases referred to here are apparently more often encountered in the United States of America, and have been described at length by Dr. W. W. Keen of Philadelphia.[11] The larger joints are chiefly involved. Suppuration is rare, but ankylosis may occur. Dislocations sometimes arise—"distension luxation." Synovitis is first observed, and may arise spontaneously or occasionally from periostitis or necrosis extending into the joint. In a series of forty-three examples collected by Keen the lower extremities were affected in thirty-nine, the upper in only seven, three of the cases involving a joint in both, for, though commonly a monarticular trouble, two large joints may be affected together. Pain is noted as but slight, but Chantemesse describes nocturnal osteocopy analogous to that of syphilitic bone disorders as not uncommon in cases of periostitis, and pain in the affected joints as simulating that of rheumatism.

Marasmus is sometimes a sequel of enteric fever and may occur in various degrees, the patient never regaining his former trophic level. Anæmia is occasionally seen, but is commonly recovered from. I have known of several instances, and heard of others, in which patients have declared that they enjoyed better health than they had before they suffered from this fever.

Deafness has been noted as a sequel, or, perhaps, more correctly, as a symptom, towards the end of the illness. Tinnitus aurium is not uncommon in the earlier course of the disease. Neither may be regarded as unfavourable. Mental weakness may occur, the patient becoming silly and childish after the decline of fever and remaining so for some weeks. This intellectual failure is commonly temporary.[12]

In some cases there is an extraordinary silence, an inability or disability for speech. This is apt to follow as the deafness passes off. In one instance under my care a young girl, though perfectly conscious, remained silent under all conditions and often in presence of her relatives for thirty-five days. She was naturally bright and lively. In another case under the care of my colleague, Dr. Church, a boy of nine years old remained silent for fifty-four days. The fever was severe in both cases. Much muscular wasting occurred in mine, but perfect recovery followed. In Dr. Church's case great stupor occurred at the end of the third week, the right arm and leg were paretic, consciousness hardly returned till the fortieth day, when the boy could move his right limbs. The sphincters were unstable till the sixty-ninth day. A perfect recovery followed. Choreiform movements have been noted in association with disability for speech in one case.[13] Paralysis of the vocal cords has been observed. In two cases both abductors were so involved as to necessitate tracheotomy. In another case with much muscular wasting and sensory disturbance one cord was affected. Recovery was complete. The distinction between central and peripheral palsies is often difficult, and is chiefly determined, according to Gowers, by noting the presence of pains in the limbs and the existence of tenderness in the nerves. The condition of silence just referred to is no true aphasia, but is almost certainly due to exhaustion of cortical nerve areas, to enfeebled circulation of impoverished blood, and, perchance, to direct and specific fever poison. Active mental derangement with delusions may supervene after apparent recovery, also melancholia.[14] These conditions are generally recovered from, but evidences of cerebral and intellectual enfeeblement and defect of memory may remain for many months, or even permanently, after severe attacks of enteric fever.

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[9] Such cases are well described and discussed in the Toner Lectures (Lecture v., vol. xv., of Smithsonian Miscellaneous Collections) by W. W. Keen, M.D. of Philadelphia, February, 1876. Washington, 1878. *Vide* also remarks by Dr. Church, in the St. Bartholomew's Hospital Reports, vol. xvii., 1881, p. 104. These cases appear to be less common in Great Britain than in France and the United States.

[10] Société Médicale des Hôpitaux, Juillet, 1890.

[11] Op. cit., p. 3.

[12] On Some of the Nervous Phenomena of Typhoid Fever. By Dr. F. W. Andrewes. St. Bartholomew's Hospital Reports, vol. xxv., p. 127. 1889.

[13] De la Harpe: quoted by Gowers. An interesting observation in view of the theory held by myself and others that chorea is rheumatism of the brain, specially involving the cortex. Vide the Rheumatic Nature of Chorea, THE LANCET, April 7th, 1894.

[14] Osler records three cases as having occurred in 229 patients.

Minute changes have been met with in the brain of the nature of small inflammatory foci. Recent researches plainly indicate that the spinal cord may suffer from residual disorders after infectious fevers and especially after enteric fever. Dr. Handford has described a case of general muscular wasting in a boy aged eleven years, the limbs and trunk being especially affected. The knee-jerks were absent, but the other reflexes remained. Enteric fever occurred at the age of five years, and there was inability to walk for two months after convalescence was established. The arms became enfeebled after the legs. At the age of nine years scarlet fever occurred, and the muscular wasting made subsequent rapid progress. There were no electrical indications of any qualitative change in the muscles, and the condition was apparently one of anterior poliomyelitis. This affection is believed by Gowers to follow upon enteric fever more frequently than after any other of the infectious diseases. Disseminated patches of sclerosis of the cord have been found by Ebstein. Leyden has placed the nervous sequels of this fever in three categories. 1. Paralyses of single muscles or groups of muscles supplied by one nerve, including cases resembling post-diphtheritic paralysis, facial palsy, strabismus, disturbances of accommodation and palatal palsy, atrophic paralysis, with neuralgic pain and diminished electrical reactions, paralysis of the radial and ulnar nerves, and other varieties. These are regarded by Leyden as peripheral neuritic disorders and not of central origin. My colleague, Dr. Shore, has, however, described a very important case in which localised muscular atrophy occurred which was proved to be due to subacute myelitis of the grey matter of the anterior cornua, involving the origins of the fifth, sixth, and seventh cervical nerves. The patient, a woman aged twenty-six years, suffered from loss of power first in the right and later in the left hand and arm three weeks after leaving the hospital convalescent from enteric fever. The extensor muscles of the forearms were wasted and there was double wrist-drop. There were no sensory symptoms. No other paralyses were discovered. Death occurred in two weeks from pulmonary gangrene and pyo-pneumothorax, and this latter complication was believed to be due to trophic disturbance arising from the spinal lesion, no other cause for it being found. 2. Paralyses of a spinal type, including paresis of the lower limbs, without atrophy and sensory symptoms; paresis with hyperæsthesia and rigidities, due to myelitis or meningo-myelitis; acute ascending paralysis (Landry); progressive muscular atrophy; and acute ataxia with affections of speech and incoördination. 3. Affections of a cerebral type: psychoses, mania, melancholia, hemiplegia with aphasia, and with optic atrophy.

Osler groups neuritis as an accompaniment or sequel of enteric fever under two heads—(*a*) local neuritis, and (*b*) widespread, diffuse, or multiple neuritis.[15] Doubt has lately been thrown upon the nature of some of the neuritic sequels of enteric fever which so closely resemble post-diphtheritic palsies, since it has been suggested that they are not improbably due to a concurrent but unrecognised specific diphtheria. Murchison described a case in which this concurrence was met with. Palatine paralysis should perhaps be regarded as a symptom suggestive of this combination, but it may, however, occur, together with general muscular weakness, after enteric fever. According to Gowers there is never the loss of accommodation or the slow progress of palsy from one part to another that is significant of diphtheria. Gubler, however, has recorded an example which, according to Bury, is unique, where paresis of the palate occurred with nasal twang of voice and paralysis of ocular accommodation. Amongst the varieties of local neuritis tenderness of the toes has been described by Handford and Osler, the pain being severe and the weight of the bedclothes unsupportable. The ulnar nerve is particularly apt to suffer. The cranial nerves may be involved, especially the third and seventh branches. Optic neuritis is very rarely met with as a sequel. Enteric fever is probably followed by neuritis more often than any other infectious fever, with the exception probably of diphtheria and influenza. From a study of many cases Bury remarks that the resulting paralyses are usually partial in extent and degree, that the muscles affected are both wasted and weak, and that the paralysis is almost invariably preceded or accompanied by some form of sensory disturbance. The muscular tremors which occur in severe cases of enteric fever may continue and be followed by symptoms of disseminated spinal sclerosis, but not by paralysis agitans. Tetany has been met with during the fever and in convalescence after some epidemics. A condition described as "the typhoid spine" by Gibney of New York and by Osler is met with sometimes late in convalescence, which may confine the patient to bed for weeks. It is characterised by pains in the back, hips, and abdomen, shooting and paroxysmal, elicited by slight movements. It is sometimes associated with general debility, but not always. No evidence of spinal disease has been detected, though periostitis and spondylitis have been suggested as possible causes. Osler believes that the disorder is purely neurotic. In his special report[16] on neuritis during and after typhoid fever he mentions having met with five cases of local neuritis amongst 390 patients. In two of these the disorder developed during the height of the fever. In the third case neuritis occurred when convalescence had been established for ten days. In the fourth case neuritis began after five weeks' illness, as the pyrexia declined. In the fifth case the disorder came on late in a tardy convalescence. In four examples of multiple neuritis, also recorded by Osler in his report, the disorder came on either late in the course of the fever or somewhat early in the convalescence.

Paraplegia of considerable severity, though not complete, has been noted, accompanied with spinal tenderness, hyperæsthesia, and sensory disturbance in the legs. It may pass off in the course of a few weeks, and is believed to be dependent on a slight degree of diffused myelitis. Increased knee-jerk and foot-clonus existed in one case seen by Gowers some months after the fever. Symptoms of more acute and rapidly spreading paralysis may sometimes supervene and lead to a fatal issue in the course of a few days. Hemiplegia is very rarely met with, but two causes have been recorded of right-sided disorder with aphasia, and in one of them optic atrophy followed.

Pleural effusions of all varieties may occur, but are not frequent. Empyema has been met with.[17] Dr. Hale White has recorded two cases in which pyo-pneumothorax was a sequel. The fever was protracted in each case. The lung gave way in both patients while straining at stool. One of these proved fatal. The other made a good recovery.[18] This accident may be explained by the softening of the pleura due to suppuration, or by the occurrence of rupture of a pulmonary abscess due to the fever or to a mixed infection supervening later.

One of the most curious sequels I have met with was linear atrophy of the skin, with extreme hyperæsthesia of adjacent parts, in a young and vigorous man. This began three months after a severe attack of enteric fever. Parallel stripes of discoloured skin were found on the outer side of the left thigh, depressed and showing perfect characters of the well-known lineæ atrophicæ or "lineæ gravidarum." This condition was evidently due to a neuritis involving both sensory and trophic fibres of a specific (typhoidal) character. Six months later I learned that the pains had much subsided and the colour of the stripes was fading, but recovery was not complete. I have found reference to several other similar cases as having been met with in this country, in France, in Germany, and in Canada.[19]

Typhlitis is certainly not generally recognised as a sequel of enteric fever, but Barling has recorded an instance in which the vermiform appendix was involved in ulceration leading to stenosis. He believes that this resulted from an attack of enteric fever which had occurred five years previously.[20] The connexion is, I think, at least doubtful, and I have never read of or met with a similar example.

Gangrene of the lung has been already mentioned as an early sequel in the remarkable case recorded by Dr. Shore. The history of that case plainly indicated that this condition was due to neuro-trophic disturbance. Sir William Jenner met with two examples after typhus fever, but with none after enteric fever. Murchison considered it a rare event, but had met with one or two instances. Probably in the majority of cases this condition may be regarded as a complication rather than as a sequel. In Dr. Shore's case the occurrence was clearly an early sequel.

[15] Johns Hopkins Hospital Reports, vol. v., 1895.

[16] Ibid., vol. v., 1895.

[17] Weintraund, Berliner Klinische Wochenschrift, Jahr. xxx., No. 13, p. 346.

[18] Proceedings of the Clinical Society, THE LANCET, Feb. 22nd, 1896.

[19] Vide British Journal of Dermatology, No. 62, vol. v, where I have recorded my case at length.

[20] Brit. Med. Jour., May, 1895, p. 1135.

A crop of boils is recorded as a sequel, causing post-typhoidal pyrexia in a case under the care of Dr. Osler.[21]

Enuresis, even of long duration, has been known to be temporarily cured after the occurrence of enteric fever.[22]

It appears certain that during convalescence there may be recurrences of pyrexia which simulate, but are not truly relapses of, enteric fever. Putting aside such causes as may disturb any convalescent—such as emotion, constipation, &c.—and cause temporary pyrexia, also such recognised sequels as periostitis, necrosis of bone, suppurative arthritis, pyæmia, erysipelas, phlebitis, and suppurative otitis media, we may note, according to Osler, a continued fever, lasting two or three weeks, apparently due to the profound anæmia which follows enterica. The temperature may range from 99° to 101° F. Thus in one case, in which normal temperature prevailed for four days after convalescence there followed a febrile period extending over sixteen days. The red globules were reduced by one-third. The fever subsided as the blood state improved, but ten weeks elapsed before the normal condition of the blood was attained. In another class of cases, two or three weeks after convalescence a rigor may supervene and a temperature of 104° or 105° F. occur on four or five occasions daily, or with intervals of a day or two of normal temperature, or of slight continued fever, and this for a period varying from two to sixteen days. No plain indications of the cause of this condition may be manifested, but it may be surmised that septic absorption has occurred from intestinal ulcers, or from a purulent focus in the spleen, or a mesenteric gland. In two of Osler's cases in this series numerous miliary abscesses were found in the kidneys, and in one of these typhoid bacilli were found and no other microbes. In other cases Eberth's bacilli were discovered in the kidneys together with other microbes—viz., the bacillus coli and the streptococcus. Sterilised cultures of the typhoid bacillus were found to produce nephritis in animals. The fact of ulceration of the bowels in enteric fever allows a ready entry into the system of specific bacilli, and Konjajoff has frequently found them in cases where albuminuria occurs in this fever. The kidneys appear to be one of the channels through which bacilli pass out of the body.

Having now considered the many and varied sequels which have been met with after enteric fever we may seek next for a rational explanation of them. If we can discover this we may fairly hope to find the clue to a settlement of the question, not only in respect of this particular fever, but of that which presses for solution in the case of all the specific infectious fevers and diseases. Modern bacteriological research leads us to regard it as highly probable, if not actually certain, that the toxines generated by the bacilli, specific in each case, are the active agents by which most of the sequels are induced in such instances. We have seen that many sequels may fairly be attributed to the extreme debility and exhaustion entailed by the acute manifestations of the disease. It suffices to examine with care the several viscera in fatal cases to be assured of the damage suffered in vital organs, which is to be fairly set down to pyrexia alone. The softening of the cardiac walls, the shrinkage of the liver induced by atrophy and molecular degeneration, the condition recognised as "cloudy swelling" of this viscus witnessed on section, and the like state of the kidneys, all point to grave trophic disturbance with inadequacy of metabolic, secreting, and other functions. Although these changes are most obvious in the organs just mentioned, we may feel sure that they exist in all the textures of the body, and must during life have been potent for evil. Similar acute degenerations occur, without doubt, though in lesser degree, in non-fatal cases, and we may cease to wonder at the low health, tardy recovery, and long failure to reach the normal level of health in these cases.[23] That special organs or areas of tissue should suffer more in some cases than in others is probably to be explained by inherent and personal weakness, since we know that such visceral weakness and textural defects are hereditary, and we may thus account for many varieties of ailments and peculiarities met with in patients. Acute illness tests the integrity and functional adequacy of such parts, and they break down under the ordeal, revealing to us one or another failure as a sequel. We may thus speak of specific and non-specific sequels. In the former case we have to reckon with localised residues of the primal disease, manifested by invasion of parcels of toxine-generating bacilli, working out their malign effects. Actual proof of this is not far to seek. It has been shown that such definite and local invasions occur and fully account for the sequels. In the case of enteric fever we have the researches of Chantemesse and Widal[24] showing the presence of bacilli in almost every tissue thus affected. These authorities affirm confidently that they have found the true bacillus of Eberth. My friend and colleague Dr. Kanthack, however, informs me that these and other observers in France had not sufficiently learned to distinguish the bacillus coli from Eberth's bacillus at the time they wrote, and that thus some doubt must still exist as to these particular researches. In Osler's case, already quoted, no such doubt can be entertained. Sultan and Burchke discovered, in one case six years after an attack of enteric fever and in another seven years after, living bacilli in abscesses of bone.[25] It is now proved that these bacilli are very tenacious of life outside the body and can exist in a potato culture for at least two years. Some of the sequels in enteric fever are not specific, but certainly due to invasion by other than the specific bacilli, to the ordinary microbes inducing suppuration, such as streptococcus, staphylococcus pyogenes aureus, and to the bacillus coli communis. These may be classed as septicæmic or pyæmic sequels, due to secondary invasion supervening, embolically or otherwise, on the specific fever, by way of venous or lymphatic channels, from purulent foci in the intestines, mesenteric glands, or spleen. Schnitzler records a case where the staphylococcus aureus had remained latent in a bone for over thirty-five years.[26] Splenic enlargement is not always a simple matter. Rupture may occur on slight provocation and has been known to occur even spontaneously.

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[21] Johns Hopkins Hospital Reports on Typhoid Fever, No. 1. vol. iv., 1894.

[22] Church: St. Bartholomew's Hospital Reports, vol. xvii., 1881, p. 107. Trousseau: Clinical Medicine, Sydenham Society's Translations, vol. iv., p. 405.

[23] According to the late Professor Aitken of Netley, no patient having suffered severely from enteric fever is fit to resume active or laborious duties for three or four months subsequently. In many severe cases the patient has almost to be created anew before sound health is established, and a year not seldom elapses before this occurs, even under favourable conditions.

[24] Société des Hopitaux, Mars, 1890.

[25] Quoted by Dr. Washbourn, Proceedings of the Royal Medical and Chirurgical Society, November, 1895. Vide also Report by H. C. Parsons of Baltimore (Annals of Surgery, November, 1895).

[26] On Traumatic Infection: Lockwood, Hunterian Lectures, Royal College of Surgeons of England, 1895, p. 42.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—A meeting of the Scottish division of this association was held in the hall of the Faculty of Physicians and Surgeons, Glasgow, on the 12th inst., Dr. T. W. McDowall of the Northumberland County Asylum being in the chair. Dr. Hamilton Marr, assistant physician, Lenzie Asylum, and Dr. Hossack, assistant physician, Inverness Asylum, were elected members of the association. The following papers were read and led in each case to considerable discussion:—Certain Conditions of the Circulatory System in the Insane, by Dr. Edgerley, Melrose Asylum; A Case of Mental Stupor, with recovery after six years' duration, by Dr. Hotchkis, Gartnavel Asylum; Forms for Case-taking and for other Asylum Records, by Dr. Urquhart, Murray Asylum; and Dangerous Lunatics and the Legal Provisions for Dealing with them, by Mr. Carswell, Glasgow.

THE NEW ISLE OF WIGHT ASYLUM.—At the annual meeting of the county council of the Isle of Wight it was reported that the new asylum now being built for the island would be ready to receive at least some of the patients about the middle of May. A clerk and storekeeper and the chief female officer (? matron) have been selected from a number of applicants. Plans of farm buildings proposed to be erected in connexion with the institution have been laid before the Commissioners in Lunacy. It will be within the memory of our readers that of the 1072 patients now crowded within the wards at the Hants County Asylum at Knowle 72 males and 112 females belong to the island, and the annual report of the Hants authorities anticipated with some considerable interest the relief which would be afforded to their wards by the completion of the separate building for the island. Meanwhile, a difficulty has arisen as to the rate of payment by the island for these patients, and the Local Government Board has been asked to arbitrate in the matter. The cost of furnishing the new building is put at £3000, and a further £6000 will probably be required for the buildings it is still proposed to erect.

The Goulstonian Lectures

ON

THE LIFE-HISTORY OF THE MALARIA GERM OUTSIDE THE HUMAN BODY.

Delivered before the Royal College of Physicians of London

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LECTURE III.[1]

Delivered on March 17th, 1896.

MR. PRESIDENT AND GENTLEMEN,—When some time ago I had formulated the theory enunciated in my last lecture there was little prospect of my being able personally to put it to the test of further observation and experiment, and as neither Laveran nor Mannaberg had connected the mosquito with the flagellum, and Calandruccio had failed to observe developmental changes in malarial parasites ingested by mosquitos, I hardly ventured to hope that my views would so soon receive the support which has been given to them.

SURGEON-MAJOR ROSS'S INVESTIGATIONS.

Surgeon-Major Ronald Ross, to whom I have already referred, was in England last winter, and, being favourably impressed with the mosquito hypothesis, determined to work it out on his return to India. After much discussion we fixed on a certain line of experiment and observation which my experience in former years in filaria work seemed to indicate as being likely to lead to some definite result one way or other. Those forms of malaria in which the crescent body is a prominent feature are the most suitable for experiment, at all events to commence with, for of all the forms of the plasmodium the crescent is the most definite, the most readily recognised in the blood, and the easiest to work with, much more so than the potential flagella-forming intra-corpuscular parasite of the quartan and benign tertian infections. We concluded that when the mosquito ingested the crescent plasmodium one of three things must happen: (*a*) either the crescent would be killed and digested without exhibiting any evolutional change; or (*b*) it would behave very much as crescents do on the microscope slide—that is, a large proportion of them would remain crescents and a certain proportion of them would become ovals and spheres, and a very small proportion of them would go on to flagellation; or (*c*) a very large proportion of the crescents ingested would proceed to flagellation, the flagella subsequently becoming free. We concluded that if the first turned out to be the case, then this mosquito hypothesis was wrong; if the second, that it was at best doubtful; and if the last, that it was probably correct, or, at all events, that it was worth pursuing further. On his return to India in April of last year Surgeon-Major Ross was stationed at Secunderabad, in the Deccan, where malaria is common enough. After some searching among his hospital patients he found a complacent native, one Abdul Kádir, a sepoy, who was suffering from malarial cachexia, and in whose blood the crescent form of the plasmodium abounded; several crescents could be found in nearly every field of the microscope. Surgeon-Major Ross placed this man under a mosquito net, introduced mosquitos which he had previously reared from the egg, and then collected the insects after they had filled themselves with the patient's blood. He then made systematic examinations at short serial intervals of the blood in the malariated mosquitos' stomachs, being careful at the same time to compare the results so obtained with control slides of finger blood prepared at corresponding times from the same patient. As a result of a prolonged study of the subject Surgeon-Major Ross found that, so far from being killed and digested by the stomach of the mosquito, with the exception of an insignificant proportion, all the ingested crescents rapidly proceeded in development; almost all became spheres, and at least 40 or 50 per cent. of them proceeded to flagellation and liberation of flagella; that is to say, the crescent conducted itself in the mosquito's stomach very much as the filaria does, and exactly as if it had got into a proper medium for development. In explanation of some of the terms employed I may mention that the expressions "spent spheres" and "pigment bodies" refer to the more or less passive spherical pieces of pigmented plasmodial protoplasm which remain after the flagella have broken away from what I may call the mother sphere; these pieces of protoplasm represent the discarded body of the flagellated organism, and, biologically, may be regarded as residual matter left after sporulation. In a letter dated May 25th, 1895, Surgeon-Major Ross says:—

"The result was my first perfect specimen of mosquito blood. About twenty minutes had elapsed since the mosquito had begun sucking; the hæmoglobin had commenced to diffuse. The blood swarmed with perfect spherules, not very large, about 6 microns (= 0·006 mm.) in diameter, but showing an almost eruptive movement of pigment, as if flagella were about to burst forth in a moment. I looked in vain, however, for flagellates; to my surprise not one was to be seen. In a very few minutes the pigment oscillation, the intensity of which was much greater than in the control specimens, began to quiet down. Many of the spheres were shaking, but, as I have said, not one was flagellate. The general view, however, was very different from an ordinary specimen. All the spheres had perfect circular contours, and I now noticed that they seemed to be in much larger numbers than in finger blood, contrary to my first impression. Here are my notes of the number of spheres mostly in thin fields: 7, 3, 9, 7, 1, 2, 3, 2, 2, 0, 2, 2, 1, equal to an average of 3 per field. The fields were consecutive. The numbers will give you some idea of the quantities of parasites. I made a specimen of a second mosquito at three-quarters of an hour after beginning to suck, and the results were precisely the same. On counting the numbers of crescent spheres and pigment masses respectively I obtained: First specimen: 7 crescents, 80 spheres, 8 pigment masses; second specimen, 14 crescents, 30 spheres, 9 pigment masses. On counting the second specimen next day I found 0 crescents, 8 spheres, and 32 pigmented masses. In both specimens the number of crescents appears a great deal too favourable, as it was possible to examine field after field without finding one. Next day I began with a finger-blood specimen, which gave, when fresh, crescents and ovals 39, spheres 10, pigment masses 1. Then I made two more mosquito specimens at about half an hour, my 18th and 19th mosquitos. Up to date I had observed only two flagellate bodies, both in finger blood. I was astonished I had not met with more. Always the spheres seemed ripe for flagella, but they did not come. The temperature of the air was 95° F. Now directly I looked at mosquito 18 I saw flagellated organisms in every field. I saw 9 altogether in a few minutes but instead of counting them I wasted my time looking at them. Two fields held 2 each, and I could have found numbers, I do not doubt, if I had looked at once over the specimen. As it was the spectacle afforded by mosquito 18 was amazing. All the spherules seemed bursting with excitement and were exceedingly numerous. I noticed in contiguous fields 6, 10, 8, 7, 10, 14, 12, 16, an average of 10 a field; but when I came to examine special fields I found 60 in one field, 72 in the next, all endeavouring and ready to burst. I think you will confess that no one has had such an experience as this in finger-blood. On looking through mosquito 19 I found the same swarm of spheres but no flagellate organisms. Next day I began with mosquito 20, fed the day before. I found mostly pigment masses, but about 20 per cent. of the parasites were still cellular—that is, spheres. I made a specimen of a fresh mosquito—No. 21—at half an hour from feeding, with a presentiment of what I was going to see: 4 flagellates and 20 spheres in the first field, 5 flagellates and 12 spheres in the second field, and 3 flagellates and 10 spheres in the third field. Flagellate organisms everywhere; one, or two, or more in every field. I must have seen over 30 or 40, though I examined only a few fields, being hardly able to tear myself away from individual organisms. The flagella were excessively fine, quite invisible in open spaces, but visible in hæmoglobinous serum. The flagellated organisms were unmistakable, because they were being dragged about all over the field generally, or were quivering and being shaken as a dog shakes a rat. The 'manifestation' nearly ceased in a few minutes, though I saw flagellates for half an hour afterwards. Mosquitos 22 and 23, at seventy and ninety minutes, gave no flagellates and but few parasites comparatively. The patient was put under the net again. Mosquito 24 gave the same results at half an hour as mosquito 21. Five flagellates in one field of 12 parasites. Flagellate organisms everywhere, especially in open parts. The 'manifestation' lasted in its intensity only for about five minutes."

SURGEON-MAJOR ROSS'S CONCLUSIONS.

Surgeon-Major Ross continued to experiment with mosquitos going over the ground again, and again generally obtaining similar results. Writing on May 28th he says:—

"The progress of things, then, is this: 1. Almost all the crescents are converted into spheres very shortly after they enter the mosquito's stomach. Sometimes a fair number of crescents may be found at ten, fifteen, twenty, or more minutes, but these are almost always seen in the same part of the specimen, and, therefore, belong probably to the last intake of blood. It is very rare to find more than one or two crescents in an entire preparation of mosquito blood made at longer intervals. Ovals are not often seen. Untransformed crescents are, I believe, also ted ones. 2. The spheres are always found. They have a perfect contour, and contain a clear material, which distinguishes them markedly from the masses of corpuscles in the midst of which they are generally found. At first the pigment is clustered together; then the outermost pigment particles begin to oscillate; lastly, all pigment particles commence swarming, while the whole cell may take on a slight jerking movement. 3. Flagellate organisms may be found at from seven to thirty-five minutes or more. When seen they lie almost always in great numbers

[1] Lectures I. and II. were delivered on March 10th and 12th and were published in THE LANCET of March 14th and 21st respectively.

in contiguous fields, suggesting that they belong to the same intake of blood and have ripened at the same time. So far as I have experienced, they are always found within a minute or two of the lens being brought to a focus. The whole 'manifestation' ceases in a very few minutes. Owing to this circumstance, and probably owing to the process of making the specimen causing the flagella to break away, the flagellated organisms are sometimes not to be found. 4. The spent spheres or pigment masses may sometimes be seen very early—even at eight minutes, but then are few in number. Their number steadily increases, almost without fail, in successive mosquitos of the same batch as regards time of feeding until, as in mosquito 39, they may reach 60 per cent. of all parasites not enclosed in phagocytes. Their appearance is quite characteristic, simply because they are not inclosed in the clear, well-defined cells of the spheres. They are easily seen to be mere dead clusters of pigment—sometimes with very feeble oscillations. They may be in masses, rings, or drawn-out clusters. Their absence in the blood of the earlier killed mosquito and their large numbers in the blood of the later killed show conclusively that they are due to a progressive metamorphosis inside the mosquito and not to crushing in making the specimen. 5. Phagocytes containing spheres and pigment begin to be seen later than the spent pigment (at about twenty minutes or so), and increase in number up to about two hours. 6. About 30 or 40 per cent. of the parasites fail to throw out flagella and remain as spheres. The above developments may be shortly stated in two sentences:—(*a*) Practically all crescents become spheres a few minutes after being taken into the mosquito's stomach. (*b*) From 30 to 40 per cent. of the spheres die after one or two hours, the rest having given out flagella, been eaten by phagocytes, or having simply broken up."

These conclusions, Surgeon-Major Ross informs me, were borne out by a number of similar experiments on three other patients having crescent parasites in their blood. In these cases, too, the evolution of the flagellated form occurred as in Abdul Kadir, so that there can be little doubt that the conclusions founded on the Abdul Kadir experiments apply equally to the crescent parasite in every case.

EFFECT OF QUININE ON THE EVOLUTION OF THE FLAGELLATED BODY IN BLOOD AND IN THE MOSQUITO.

I may mention a curious circumstance in connexion with Abdul Kadir's crescents which gives, perhaps, a certain amount of additional support to the claim the mosquito has to be regarded as a suitable nurse for the plasmodium. After a number of days the patient began to be feverish and it was evident that an attack of acute malaria was impending. Not feeling justified in exposing the man to what might prove to be a serious illness Surgeon-Major Ross administered some doses of quinine, and at the same time continued his mosquito observations. The effect of the drug on the parasite was curious. Hitherto a certain proportion of the crescents in finger-blood underwent evolutional change into oval, spherical, and, in a very few instances, into flagellated bodies; but, after the administration of quinine, the crescents in finger-blood remained crescents in every instance. Apparently the drug had at least impaired their vital energies if it had not killed them outright. But when the crescents which had been swallowed by the mosquito in the cinchonised blood were examined it was found that the usual evolution into sphere and flagellated body took place as before, only with this difference, it was delayed for about a quarter of an hour beyond the usual time. This would seem to show that the conditions afforded by the mosquito's stomach are so favourable to the evolution of the crescent that they can with time overcome the paralysing influence of quinine on the plasmodium. Surgeon-Major Ross had commenced the difficult task of following up the flagellum to its destination in the tissues of the mosquito, when, unfortunately, official duties called him away from Secunderabad and forced him to suspend his work on malaria.

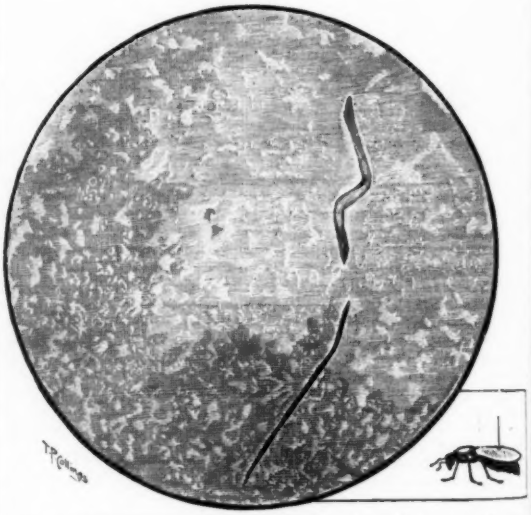
EXPERIMENTS ON COMMUNICATION OF MALARIA TO MAN BY MOSQUITO WATER.

In the course of his investigations Surgeon-Major Ross received much encouragement from an experiment he performed. After due explanation he administered to a healthy native the drachm or two of water in which a couple of malarialised mosquitos had died after depositing their eggs. The remains of the insects had been removed, but the eggs and some mosquito grubs which had just been hatched out from some of the eggs were swallowed. Eleven days (the incubation period in experimental malaria, be it noted) after this peculiar draught the man got an attack of fever characterised by headache, rise of temperature to 103°F., lassitude, and so forth, but no rigor. The fever lasted three days and then subsided spontaneously. In the blood a considerable number of the ring form of the plasmodium were found; but although many examinations were made during the next week or two no crescent form appeared nor was there any relapse. Nothwithstanding the absence of crescents and of relapse and the spontaneous subsidence of the fever, which, clinically, was of the æstivo-autumnal type usually associated with crescents, there can be little doubt that this was a case of malarial disease. Whether it was the result of the mosquito water, or whether its occurrence eleven days after the administration of this was simply a coincidence, it is impossible to say. Surgeon-Major Ross repeated the experiment in several other natives, but he did not again succeed in producing malarial fever of an unequivocal character.

SUGGESTIONS FOR FURTHER INVESTIGATIONS.

Surgeon-Major Ross has proved by observation the correctness of my conjecture that the stomach of the mosquito is a suitable medium for the flagellated phase of the plasmodium malariæ to develop in; and it behoves us, starting where he left off, to trace the progress and fate of the flagellum. The first thing we have to do is to find out where the flagellum goes after it has been set free in the blood of the mosquito's stomach, and this is only possible by systematic observation from hour to hour and day to day. When working out the life-history of the filaria in the mosquito the relatively enormous size of this parasite made the task of tracing it a comparatively easy one, even with the imperfect apparatus I had at my disposal. With modern methods of sectioning the task would have been still easier. I find that if a living filariated mosquito is plunged into some hardening medium a few hours after it has fed, and in due course embedded, sectioned, and stained, it is a very easy matter to trace the filaria in its progress from the abdomen of the insect to the thoracic muscles, and through its subsequent metamorphosis. The preparations represented by Figs. 18 and 19 were made in this way. Fig. 18 represents a somewhat oblique section of a filaria which is still lying in the blood of the abdomen of the mosquito. It has evidently just succeeded in escaping from its sheath, part of which can be seen lying empty some

FIG. 18.

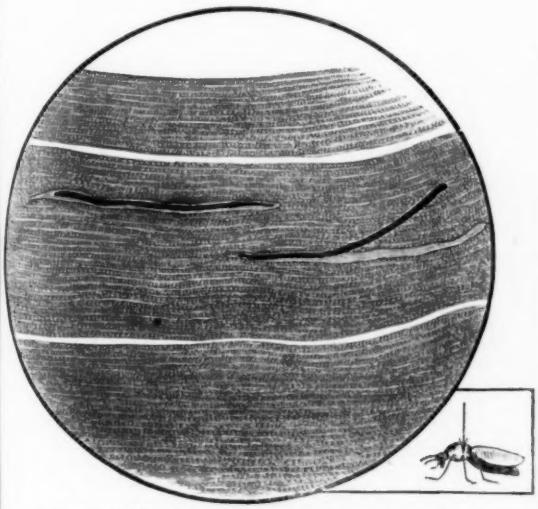


A somewhat oblique section of a filaria in the stomach of a mosquito. The darker object is the filaria; it has just escaped from its sheath, the more lightly shaded object lying above the free filaria.

distance behind it. Fig. 19 represents a longitudinal section of the thoracic muscles of the same mosquito. Two filariæ can be made out. One is still *in situ* and lies stretched out among the muscular fibres between which it doubtless had been boring its way; the other, which when alive had occupied a similar position, has been partially turned out from its bed by the stroke of the section knife. From such and similar preparations it is easy to read the story of the filaria in the mosquito. Now I would suggest that the progress of the flagellum might be made out and demonstrated in the same way. Malaria'ed mosquitos, after being plunged at

serial intervals from the time of feeding into half per cent. osmic acid for a minute or two, might be hardened in formalin or some other suitable agent and then sectioned and stained in different ways. I can conceive that in insects so prepared the shower of flagella, emitted about half an hour after feeding, might be traced in the blood in the abdomen, a more or less continuous stream setting in towards the particular cells in which, as I have explained, the

FIG. 19.



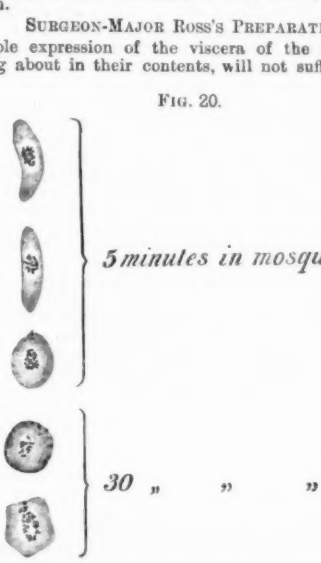
Two filariæ lying between the muscular fibres in the thorax of the mosquito.

flagellum seeks to bury itself and which we are in search of. Some of the flagella would perhaps be caught in the act of entering; and some of them, perhaps, might be seen already coiled up in the interior of these cells. This particular cell once discovered the remainder of the task would be easy enough.

SURGEON-MAJOR ROSS'S PREPARATIONS.

Simple expression of the viscera of the mosquito, and groping about in their contents, will not suffice to discover

FIG. 20.



the plasmodium after the stage of free flagellum has passed. In preparations which Surgeon-Major Ross sent me last year I have been able to follow, to some extent, the transmutations he describes. The bodies represented in Fig. 20 were drawn from such preparations, and, so far as they go, they unmistakably bear out his statements. They are sufficiently confirmatory to warrant us in placing implicit reliance on the description he gives of the phenomenon of ex-flagellation in the mosquito. The flagella are structures so delicate and so difficult to stain that the rude preparations these drawings were made from cannot be expected to show them. Short of this, however, they are convincing. The upper figures, representing the crescent bodies, are from a mosquito killed five minutes after it had fed. One can easily pick out in the preparation every variety of developmental form, from crescent to ellipsoid. The two lower figures are from a preparation made thirty minutes after the mosquito had fed. In it we can make out here and there forms belonging to the flagellated organism, to the spent spheres, and to the pigment masses. The pigment they contain suffices to establish the plasmodial nature of the bodies in which it lies.

[Dr. Manson here enumerated the more debatable points of his argument. He continued:—]

OBJECTIONS TO THE MOSQUITO THEORY.

Until malarial disease is communicated by the administration of plasmodial forms that have been passed through the mosquito, until the theory is proved up to the hilt, it is probable that various objections will be raised. For instance, there are many places in the world where, though mosquitos abound, malaria is rare; and, again, there are certain places on the west coast of Africa and elsewhere where malaria is notoriously prevalent although mosquitos are absent; but the most serious difficulty in the mosquito theory is the fact that as yet we have not been able to trace the flagellum into the tissues of the mosquito. The reasons for this I believe to be the delicacy and minuteness of the object, the complicated character and abundance of cell forms, with which we are as yet very imperfectly acquainted, in the mosquito, and our ignorance of a suitable technique. Until the flagellum has been traced into some cell in the mosquito it is possible that I may have been misled by the marvellous analogy between the requirements and structure of the plasmodium and those of the filaria, and by the apparent suitability of the structure and habits of the flagellated plasmodium and the flagellum to the conditions they encounter in the mosquito. It is just possible that the invariableness with which the metamorphosis of the crescent is effected in the mosquito, the certainty with which "the manifestation" of flagellation occurs in from twenty to thirty minutes after ingestion of malarial blood by the mosquito, are mere coincidences. One may say, the phagocytes live for a time in the mosquito, why not the flagellated body? It can live on the microscope slide, why should it not live in the mosquito's stomach? While acknowledging that these are points requiring further investigation I do not recognise in them grave arguments against the validity of my theory, and I hold that Surgeon-Major Ross's investigations have rendered it so probable that I look confidently to him and to other workers in India and elsewhere to forge the links that are still wanting to complete the chain of evidence.

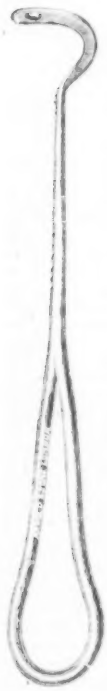
THE OPERATION FOR STRANGULATED INGUINAL HERNIA CONSIDERED IN RELATION TO RECENT ADVANCES IN SURGERY.

BY C. B. LOCKWOOD, F.R.C.S. ENG.,
ASSISTANT SURGEON TO ST. BARTHOLOMEW'S HOSPITAL, AND SURGEON TO THE GREAT NORTHERN CENTRAL HOSPITAL.

DURING the last few years when called upon to operate for strangulated inguinal hernia I have performed an operation which differs in many ways from that which used to be done. It is highly probable that other surgeons follow exactly the same course as that which I am about to describe, but even such modern works upon operative surgery as those of Mr. Jacobson and Mr. Treves illustrate the operation for strangulated inguinal hernia with figures which go back to Fergusson and describe an operation unlike the following. Briefly defined it is simply the operation for the radical cure of inguinal hernia, but differs in that the contents of the sac are strangulated. The objects aimed at are not only to relieve the strangulation but also to cure the hernia, or, at least in older people, to make it amenable to a light truss.

Perhaps it may be as well to take the operation step by step, omitting such details as are adequately dealt with in text-books; and, first, it will be observed that no special instruments whatever are needed except a pair of suitably curved blunt needles for transfixing the sac or omentum, if any of the latter has to be removed, and for restoring the inguinal canal. A well-made pair of blunt needles adds much to the ease and safety of those steps of the operation. Messrs. Arnold have made for me some which both myself and others prefer to Professor Macewen's original model. Their curve is rather less and shorter: the metal in the curved part is distributed so as to make them more rigid, and the hole is made much easier for threading by making it run across the point of the needle, so that it can be threaded from right to left (Fig. 1). The other instruments required are a scalpel, scissors, dissecting forceps, eight or nine pressure forceps, a straight and curved Hagedorn's needle, together with some sterilised silk and fishing-gut. A director and herniotomy knife are not required because the neck of the sac is divided from the outside. Perhaps I may add that the same instruments are used for the operation for strangulated umbilical hernia. A broad-grooved director and herniotomy knife are still necessary for the operation upon strangulated femoral hernia.

FIG. 1.



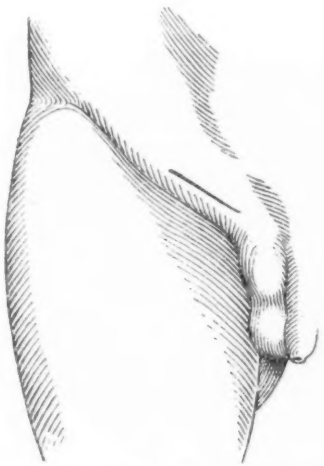
Assuming that the field of operation has been properly prepared by the complete removal of hair, by scrubbing and washing, by the extraction of the cutaneous fat with turpentine or ether, and by disinfection with a strong chemical such as one part of biniodide of mercury in 500 parts of spirit, and by a girdle of disinfected towels, the skin incision is made as follows. Instead of cutting down upon the hernial sac in the scrotum, as is shown in Fergusson's figure already alluded to (Fig. 2), an incision is made parallel to the inner half of Poupart's ligament and half an inch above it (Fig. 3). This incision is the same as that used for the radical cure of the inguinal hernia. It has the following advantages. First, it avoids the scrotum—a region which is notoriously difficult to cleanse or disinfect, exceedingly hard to keep aseptic and highly disposed for infiltration and accumulations of blood; secondly, it brings the operator straight down upon the seat of constriction whether it is at the external abdominal ring, in the inguinal canal, or at the internal ring; thirdly, it facilitates the radical cure; and, fourthly, it permits of the application of a secure, air-tight, and pressure-exerting dressing. This skin incision having been made all the tissues covering the sac, including the aponeurosis of the external oblique

FIG. 2.

Fergusson, the scrotal incision. In this figure the half-shaved pubis is not in accord with modern views.

muscle, are divided and the inguinal canal opened from end to end. The sac itself is pinched up and opened at the inner angle of the wound. If it does not present it is easily pushed up by squeezing the scrotum. As soon as a free opening has been made with knife or scissors, and before the constriction is divided and the peritoneal cavity opened up, all the sac fluid is evacuated and the inside of the sac and its contents thoroughly disinfected with chemicals, such as 1 part of biniodide of mercury in 1000 parts of water. This step is very important. It has been long known—and recent work confirms the fact—that in most instances the fluid in the sac of a strangulated hernia is septic. Tavel and Lanz,[1] to whom we are indebted for some

FIG. 3.



The inguinal incision over the inguinal canal.

of the latest and best investigations, found the colon bacillus (several varieties), proteus vulgaris, and pseudo-diphtheria bacillus in the fluid in the sacs of strangulated herniæ. Bönneken found bacteria in the fluid when it was quite clear and after only four hours' strangulation—the gut, of course, being quite viable. This is in accord with the experiments of Arndt and others upon the effects of constriction upon the intestines. Although the septicity of the fluid in the sacs of strangulated herniæ has been known since 1869 when Nepveu first saw the bacteria, the importance of a thorough disinfection after opening the sac has hardly had the recognition which it undoubtedly deserves. The sac having been disinfected, it is now quite easy to divide all constriction about its neck with the knife or scissors. If by chance the hernia be of the direct variety, the epigastric artery might cross over the front of the upper part of the neck of the sac. It is desirable, therefore, to proceed with some caution. But in direct hernia the artery and its venæ comites are easily seen and avoided. Indeed it is in much less danger than when the surgeon is dividing the constriction by cutting with the knife and director from within the sac. Moreover, it would be quite easy to secure the artery if it was wounded, because the incision is wide open and accessible.

Having disinfected the sac and relieved the strangulation the contents of the sac have to be dealt with. Here one of the great merits of the inguinal incision becomes apparent. In many large inguinal herniæ the intestine is overlaid by a mass of omentum. In some this omentum has become matted together and adherent about the neck of the sac. As the adhesions are all in sight in this operation, they can be rapidly and safely undone and the omentum tied high up and removed. Having seen two deaths from hæmorrhage from divided omentum, I am always most anxious at this stage. In one of the fatal cases the ligature came off the stump of the omentum, the operator having omitted to transfix it with his ligature. In the other the hæmorrhage came from vessels near the stomach. These had been torn through in pulling the omentum down. When much omentum has to be tied it is better to introduce several interlocking ligatures rather than trust to a single one. The latter may make such a large stump

[1] Ueber die Aetiologie der Peritonitis. Basel, 1893, p. 16, &c.; also Figs. 8, 16, 24, 28, &c.

that it will hardly return into the abdomen. The intestine is next examined, thoroughly disinfected, and returned. Should it have contracted adhesions to the fundus of the sac or to the testis it is quite easy to turn the sac inside out and undo them. When the cæcum or sigmoid flexure is herniated their relations to the sac are sometimes very embarrassing. On several occasions I have under these circumstances divided the sac transversely below the adherent intestine, closed it, and returned it with the intestine into the abdomen. In addition to the facility with which the omental and intestinal adhesions can be dealt with through the high incision I have found that it renders the resection of gangrenous intestine a comparatively easy procedure.[2] The damaged bowel together with a sufficiency of healthy bowel and mesentery cannot always be pulled down through the scrotal incision; also the subsequent return of the sutured intestine is difficult when the wound is in the scrotum. Both the intestine and mesentery are easily dealt with through the inguinal incision and reduction is easy with the peritoneal cavity wide open.

The strangulated bowel or omentum having been dealt with, the hernial sac calls for attention. It is divided transversely about an inch from its opening into the abdomen and its upper part separated from the constituents of the spermatic cord, transfixed with a silk ligature, and tied with a Staffordshire knot. It may be difficult to separate the sac from the cord, but this difficulty is less near the mouth of the sac because at that point the cord is less adherent to the peritoneum. The fundus of the sac need not, as a rule, be taken away. It is safe to let it fall back into the scrotum. However, if the sac is small and not adherent to the cord it may be taken away. Also it is advisable to remove it in any case if it forms a bulky mass likely to distend the inguinal canal. When the mouth of the sac is very capacious it may require to be laced up with a series of sutures which transfix it and interlock with one another. An operation for strangulated hernia is not complete until an attempt has been made to effect a radical cure. In congenital hernia this is done with excellent prospects of a permanently successful result. In acquired hernia it may be advisable after awhile to order a light truss. But even in the last case the repair of the abdominal wall adds to the safety of the patient and makes the precautionary treatment with a truss much easier.

A satisfactory radical cure could not be done through the scrotal incision. Stitches passed without the aid of vision are not reliable. But when the whole inguinal canal is laid bare each step of a radical cure is done quickly and securely. The radical cure which I perform has been described elsewhere.[3] Briefly it is Bassini's operation with some modifications. It comprises the following stages:—First, the neck of the sac is, as I have just said, transfixed with a silk ligature. This is tied and its ends carried with a blunt needle through the transversalis fascia, transversalis muscle, internal oblique muscle, and aponeurosis of the external oblique. Then they are tied beneath the skin so as to fasten the stump of the sac beneath the muscles of the abdominal wall opposite the outer third of Poupart's ligament. Secondly, the spermatic cord is lifted up and the back of the inguinal canal closed by uniting the internal oblique and transversalis muscles and the transversalis fascia to the deep surface of Poupart's ligament by means of silk sutures. Thirdly, the inguinal canal is closed by uniting the cut edges of the aponeurosis of the external oblique muscle, and, finally, by closing the wound in the skin. In a great number of operations I have never known the division of the aponeurosis cause any ill results. An air-tight dressing, which exerts proper pressure, is easily applied to the wound. Scrotal wounds are notoriously difficult to dress and do not permit of any adequate pressure. Nearly every surgeon has his favourite dressing. A layer of carbolic gauze which has been soaked in a 1 in 2000 solution of biniodide of mercury in water supplemented with a layer of alembroth wool and covered with an outside dressing gives good results. The outside dressing ought to be cut to fit and fastened round the pelvis and thigh with straps and buckles. The whole is secured with a spica bandage. As this operation is directed by vision it is easy to perform and unattended with accidents.

Upper Berkeley-street, W.

[2] A Case of Resection and Immediate Suture of Intestine, &c. Transactions of the Royal Medical and Chirurgical Society, vol. lxxviii., p. 193, &c.

[3] The Radical Cure of Femoral and Inguinal Hernia.—THE LANCET, Nov. 25th, 1893.

A NEW AND EASY METHOD OF PREPARING SERUM AGAR-AGAR: AN AID TO THE DIAGNOSIS OF DIPHTHERIA.

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AND
J. W. W. STEPHENS, M.B.,
TREASURER'S STUDENT IN PATHOLOGY.
(*From the Pathological Laboratory, St. Bartholomew's Hospital.*)

VARIOUS nutrient media have been recommended from time to time for the separation of diphtheria bacilli, and of these Löffler's serum agar-agar has generally been considered to be the best. There are, however, some difficulties, though perhaps slight, in obtaining the serum and in preparing the mixture. These are felt most in a busy laboratory insufficiently endowed with assistants. It is not always easy to procure serum without some or much loss of time. At a large general hospital there is always a copious supply of ascitic, pleuritic, or hydrocele fluids—albuminous exudations directly derived from the human blood—which are, as a rule, wasted after being measured into pints, ounces, and drachms. It struck us that these fluids might be used with advantage instead of serum. We soon found a ready method of preparing from them large quantities of beautifully clear and transparent agar-agar in less than an hour. We proceed as follows:—

To every 100 c.cm. of the serous exudation 2 c.cm. of a 10 per cent. solution of caustic potash must be added, thereby the serum albumin is converted into an alkali albumin which is not precipitated on boiling. To this we add 1·5 to 2 per cent. of agar-agar, previously soaked in acidulated water,[1] and boil the mixture in a Koch's steamer till the agar-agar is well dissolved. When this has happened the liquid in the flask will appear as transparent as if it had been cleared with white of egg. It must now be filtered through a hot-water funnel, and if a coarser kind of filter-paper be used it will generally run through very quickly and, at the same time, be marvellously clear. To the filtrate 4 to 5 per cent. of glycerine should be added. It may then be poured into test-tubes, and the contents of the latter after sterilisation will set firmly and often form a medium almost as transparent as gelatin. If the serous exudations are worked up as soon as possible after they have been received from the body the resultant agar-agar will be clear and light. Besides glycerine, 0·5 to 2 per cent. of grape sugar may be added; but we have not found that this in any way improves the medium, but on the contrary the combined presence of the sugar and the caustic alkali renders the agar-agar darker.

This serum agar-agar has the following advantages:—(1) it is quickly prepared with very little practice, often in about half an hour; (2) it is exceptionally clear and transparent; (3) its basis is derived from the human subject; (4) the serous exudations can be easily obtained, free of cost and trouble; (5) it does all that serum can do; (6) its selective action on the diphtheria bacilli is greater than that of any other serum preparation known to us; (7) its inhibitory action on staphylococci, bacillus coli communis, &c., is indeed extraordinary; (8) cultures which on ordinary media appear as uniform streaks in this medium develop as individual colonies, so that subsequent cultivation is rendered easy; (9) organisms which utterly refuse to grow on gelatin and agar-agar thrive well on this soil, and we have therewith separated certain bacterial forms which on other media have always escaped us; (10) this medium can be readily melted and be then used for the purpose of plate cultivations; the resulting plates are more transparent and drier than ordinary agar-agar plates. In a diphtheria diagnosis it has saved us a considerable amount of time, and now, after it has been tested for some months both in Dr. Klein's and our own laboratories, we feel that this short account may be of use to other workers.

We must add one word of advice. Before adding the caustic potash to the serous fluid we always boil a small quantity of it in a test tube. If it becomes practically solid

[1] Kanthack-Drysdale: A Course of Elementary Practical Bacteriology, Macmillan and Co., p. 90.

or contains large quantities of albumin, the fluid must be diluted with at least twice its bulk of distilled water, and then to every 100 c.cm. of the diluted fluid 2 c.cm. of KOH and 1·5 to 2 grammes of agar-agar are to be added. Unless this is done the whole mass will gelatinise and be utterly useless. This difficulty we did not recognise at first, because it is one which does not often arise. The serous exudation after the addition of the alkali forms also a good liquid nutrient medium for bacteria—useful because it is easily sterilised and because it favours the chemical activity of many pathogenetic organisms.

FOUR CASES OF EARLY EXTRA-UTERINE GESTATION.[1]

BY ALBAN DORAN, F.R.C.S. ENG.,
SURGEON TO THE SAMARITAN FREE HOSPITAL.

ABOUT a year ago within the space of four months I had under my care four patients who consulted me for symptoms now very familiar to the reader of medical literature. These cases suggest a consideration of certain diagnostic features and of the justifiability of operative interference. The latter greatly depends upon the former. One case clearly required immediate operation. The second was in such suffering that surgical aid was sought and proved justifiable. The third was in a somewhat similar condition, but the patient was single, the clinical history not quite reliable, and the symptoms obscure in certain respects. The operation was, strictly speaking, exploratory. The fourth, which resembled the others in many ways, showed no acute symptoms and recovered after prolonged rest without any operation.

CASE 1.—The patient, aged twenty-five years, had been married three years and had borne one child eighteen months before operation. The periods had been regular, the last occurring fourteen weeks before the removal of the fœtus. For two months several violent attacks of pain and syncope

FIG. 1.

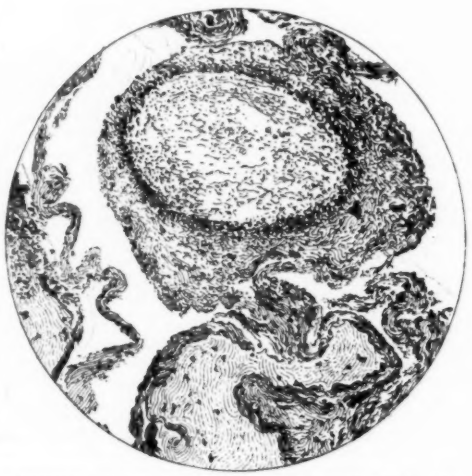
Tubal sac, Case 1, showing position of fœtus. (Specimen now in the Museum of the Royal College of Surgeons of England, No. 4695 G, Pathological Series.)

had occurred. Dr. Hubert Roberts detected a very tender swelling in the right iliac fossa pushing the uterus upwards and to the left. The patient was admitted into the Samaritan Free Hospital under Dr. Boulton. A characteristic seizure took place one night, and as she was very pale and weak I decided on operating at once, being assisted by Dr. Hubert Roberts and Dr. Walter Tate. After clearing away a quantity of clot and liquid blood I came upon a ruptured cyst bleeding very freely. A fœtus five and a half inches in length protruded from the rupture. (Fig. 1.) I succeeded in making a pedicle between the right side of the uterus and the cyst, which was then removed. It had developed in the infundibulum of the tube. I cleared out all free clots, leaving alone the half-organised coagula, which adhered firmly to the peritoneum, and closed the abdominal wound. The patient was suffering at the time from acute bronchitis, which retarded convalescence. At present, eleven months after the operation, she is in good health.

CASE 2.—The second patient was a thin, sallow woman aged forty years. She had been married fourteen years, her only pregnancy occurring a year after marriage. Usually quite regular, she missed a period, and three weeks later the right iliac fossa became tender. Two days afterwards a very severe attack of pain, with pallor and collapse, set in and radiated down the front of the thigh. Called in by Mr. Nourse of Holloway to examine her, I detected a distinct tender swelling in the right fornix. After a week's rest several more paroxysmal attacks occurred, suspicious shreddy structures were passed from the uterus, and the swelling grew larger. The temperature rose to 100·8° F. The breasts were flaccid. I operated on March 23rd, 1895, exactly a calendar month after the first attack of pain. The patient had grown very weak from the pain, but was not distinctly anæmic. I found several ounces of dark blood in the pelvis. A spherical sac of the isthmus of the tube, two and a half inches in long diameter, was plainly adherent to the small intestine and the vermiform appendix. On separating the adhesions I exposed a laceration in the upper part of the sac which at once bled very freely. The inflammatory changes had stopped the hæmorrhage. The affected tube and ovary were removed. I cleared the pelvis of clots and closed the abdominal wound. The period reappeared on the fortieth day after the operation, and the patient, who has gained flesh, has been regular ever since. Though no fœtus was found the microscope confirmed my suspicions that there had been ectopic gestation. (See Figs. 3 and 4.)

CASE 3.—I am indebted for the third case to Dr. Rasch. She was a naturally anæmic Polish Jewess, aged eighteen years

FIG. 2.



Chorionic villus in clot adherent to wall of tube, Case 3. The dark border represents the trophoblast.

and unmarried. After suffering cruel privations from sudden expulsion from the Russian Empire she settled in the East-end with her mother, who one night scolded her for coming home late and expressed suspicion about her conduct. The girl flew into a passion and stamped on the ground, upon which a paroxysm of intense pelvic pain set it. Another attack came on a few days later with a show of blood, which she believed, or wanted others to believe, to be a period. Dr. Rasch discovered a painful swelling in the right iliac fossa. A free show of blood began about a month after the first attack of pain. Rest was of no avail. I operated on Jan. 8th, 1895. After separating the adherent omentum, small intestine, and vermiform appendix I drew up a cyst of the infundibular part of the right tube full of tarry blood and about three inches in diameter. The rest of the operation was easy; a good pedicle could be made as there was

[1] Read at a meeting of the Medical Society of London, March 23rd, 1896.

over half an inch of tube internal to its fœtal sac. I broke down the adhesions which bound down the left appendages and closed the abdominal wound. The patient soon regained health. A well-marked chorionic villus was found in the clot adherent to the wall of the sac. (Fig. 2.)

CASE 4.—The fourth case recovered without operative interference. The patient aged thirty-four years had been married thirteen years. Since her only pregnancy, ten years ago, she suffered from frequent attacks of pelvic pain and had been laid up twice in the last two years. The catamenia suddenly ceased, and when two weeks overdue a paroxysm of pelvic pain set in with nausea and retching. On the second day a coffee-coloured discharge appeared and continued for six weeks; then Dr. Walter Tate examined her and noted:—"Cervix forward; body of uterus pushed forward two and three quarter inches. Firm, elastic swelling fills up the right side of the pelvic and posterior part and extends to the level of the umbilicus. Harder and more nodular on the left side." Two days later the patient felt the menstrual molimen and the show increased. Next day Dr. Tate sent her into the hospital as the swelling was increasing. I found the patient to be fairly nourished; the breasts were flaccid. The tumour was as above described by my colleague and it extended down to the left fornix. As no second paroxysm of acute pain had occurred I kept the patient in bed for three weeks. At the end of that period the mass had become much smaller and harder; it was clearly a hæmatocele. Dr. Tate watched the patient carefully. Eight months later he reported that "the tumour had become almost entirely absorbed. It was not larger than an egg and the patient was perfectly well."

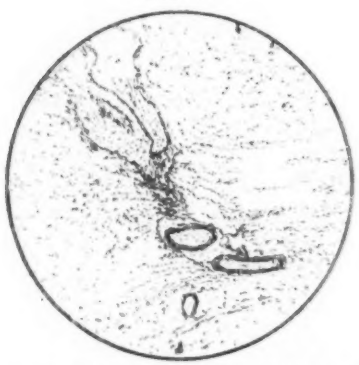
Remarks.—These cases tend to show that sudden attacks of pain associated with the development of a mass on one side of the uterus are the most characteristic symptoms of early ectopic gestation. The signs of normal pregnancy may be absent. Amenorrhœa is very unreliable, nor must we forget that menstruation may continue during normal pregnancy. The period had ceased in Case 1, which was so perfectly clear. In Case 2 it had ceased eleven weeks, but there was "show"; in Case 4 there was a continuous coffee-coloured discharge for six weeks. In these two latter cases the patients were intelligent and based their statements on the absence (Case 2) or presence (Case 4) of the menstrual molimen. We know, however, that this purely subjective symptom may mislead multiparæ. In Case 3 the patient's veracity was doubtful. In Case 1 alone was there any tendency to the changes in the breasts which are characteristic of pregnancy. The remainder were all more or less sickly. On the other hand, a trace of evolutionary change in the mammæ may remain for months or years after lactation, and the development of pelvic or even abdominal disease may set up fulness in the glands. In December, 1895, I examined a young woman who had a large abdominal tumour. One breast was distended and milky fluid issued from the nipple. The urine was normal. I explored and removed a large tumour of the right kidney. The uterus showed no sign of pregnancy. The breasts are, then, an uncertain guide in early ectopic gestation. The decidua is a valuable bit of

CASES OF EARLY EXTRA-UTERINE PREGNANCY.

No. of case.	Age.	Married or single.	Children and last confinement.	Catamenia and state of breasts.	Last period.	Hæmorrhage apparently not connected with period.	Decidua.	Symptoms, besides menstrual irregularities or hæmorrhages.	Condition discovered at operation.	Catamenia after operation.
1	25	Married (3 years).	1 (18 months); no abortion.	Catamenia previously regular. Breasts full; nipples prominent.	14 weeks before operation; normal.	Occasional spot or two of blood. A month before operation blood and matter came away (probably from rectum — operation for fistula 2 years before).	Nothing like decidua ever detected.	Several attacks of pain within last 2 months; pain and syncope 1 week, then tender swelling in right iliac fossa, rising above symphysis; acute attack of pain with anæmia and syncope, when operation was performed.	Ruptured cyst of infundibulum of right tube. Peritoneal cavity full of clots. Cyst removed, left appendages normal.	Reappeared 4th day after operation; again 32 days after operation; regular for last 8 months.
2	40	Married (14 years).	1 (13 years); no abortion.	Catamenia regular. No changes in breasts.	11 weeks before operation; profuse, not very painful.	"Show" 16 and 8 days before operation.	Shreddy structures, mixed with recent clot, passed 8 days before operation.	Violent pain in right iliac fossa (preceded by 2 days of local tenderness) a month before operation, pallor, collapse, swelling in right fornix, frequent paroxysmal attacks with faintness, fever, &c.; emaciation; anæmia not marked.	Pelvis contained dark blood. Cyst of isthmus of right tube ruptured; laceration closed in by firm adhesions to intestines and vermiform appendix. Removed.	Reappeared on the 40th day after operation. Regular ever since.
3	18	Single.	No evidence of former pregnancy.	Catamenia very regular. No changes in breasts.	1 month before operation; profuse "show" (see next column).	Uterine hæmorrhage twice in the 2 months before operation. (Patient's statements not reliable.)	Nothing like decidua detected.	Two months before operation sudden attack of severe pain in pelvis following a fit of passion; tumour developed in right iliac fossa; marked anæmia, but of long standing.	Thin-walled tubal cyst full of tarry blood in infundibulum of right tube. Omentum, vermiform appendix, and coils of small intestine adhered. Cyst removed. Chorionic villi found in clot.	Reappeared 6 weeks after operation. Continues regular 1 year after operation.
4	34	Married (13 years).	1 (1? years); no abortion.	Catamenia regular, but scanty. Breasts flaccid.	2 weeks overdue when acute symptoms set in.	Coffee-coloured discharge for 6 weeks.	Nothing like decidua detected.	Pelvic pains ten years (since sole confinement); acute attacks twice in last 2 years; severe pelvic pain, nausea, and retching came on suddenly when the catamenia were 2 weeks overdue; coffee-coloured discharge began next day; firm elastic swelling on right side of pelvis, reaching to umbilicus; uterus 2½ in., pushed forwards and upwards.	No operation. After 3 weeks' rest in bed the swelling became very much smaller; 8 months later it was not larger than an egg, and patient was perfectly well.	(No operation.) Quite regular since subsidence of swelling.

evidence if it be shed, detected, and preserved. Pilliet[2] has recently shown that in early ectopic gestation it is not smaller, but, on the contrary, much more developed than in normal pregnancy. In Case 2 suspicious shreddy structures were expelled after one attack of pain: in others the decidua was either not shed or escaped unnoticed. In Case 2 the last pregnancy occurred thirteen years before, and in Case 4 ten years before the abnormal gestation, but in Case 1 the patient had a child eighteen months old, whilst in Case 3 the patient was only eighteen years of age and probably a primipara. The previous histories are just as conflicting in respect to pelvic inflammation from which Case 4 had suffered for ten years, whilst Case 2 had been perfectly well during her thirteen years of sterility. Case 1 seems to have been free from this complication, and Case 3 was very ill after expulsion from Russia. Acute anæmia was marked in the self-evident Case 1. Case 3 was extremely anæmic, but through constitutional causes, and the hæmorrhage was confined to the interior of the sac. In Case 2 the pallor was marked at every paroxysm of pain and passed off soon, to be replaced by sallowness. In short, it was the pallor of pain. In Case 4 there was no pallor though there was evidence of extensive hæmorrhage. On the other hand there was a history in all of one or more violent attacks of pain. The cause, in ectopic gestation, of this paroxysmal agony is an interesting subject, but it cannot be discussed at present. In Cases 1 and 2 the attack frequently recurred. In Case 3 there was only one fit of severe pain, which directly followed a fit of violent passion: no doubt hæmorrhage into the sac occurred then. The dull pain which followed and increased was clearly due to the peritonitis which developed around the sac. The microscope settled the nature of the tubal swelling. From the first three cases we can fairly assume that extra-uterine pregnancy existed in Case 4. Severe pelvic pain, nausea, and retching came on in association with previous menstrual irregularity and subsequent uterine hæmorrhage and development of a hæmatocele. When an operation has been performed the diagnosis may remain uncertain, for the fœtus is often destroyed by the internal hæmorrhages. The clot and tubal wall should always be examined by a competent observer. I must thank Dr. Eden and Mr. Targett for their opinions on my specimens. In the sections from Case 1 the villi were well developed and were eating through the thin sac wall, as often happens after the first two months. No traces of decidua remained. In Case 2 no fœtus was found, but the appearances of the sections were absolutely pathognomonic. In the photo-micrographs which are here reproduced (they were taken by Mr. Roughton and Mr. Cosens) the chorionic villi are very evident. (Figs. 3 and 4.) The trophoblast

FIG. 3.



Chorionic villi in clot adherent to the wall of tube, Case 2. (Half an inch objective.)

layer, nucleated yet not divided into cells, shows very clearly. Dr. Eden detected large, round, decidual cells in an involution of the tubal wall. As the ostium was not closed there possibly might have been tubal abortion at an early stage, with subsequent hæmorrhage into the sac. In conclusion, it seems that operative interference is always called for when acute symptoms are present, especially if they have recurred. The chances of permanent subsidence of the pain and that which causes it are less than the risk of fatal hæmorrhage or complications very prejudicial to health. Thus an operation is less perilous than expectant treatment.

FIG. 4.

One of the villi seen in Fig. 3, one-eighth of an inch objective. The trophoblast is very well developed.

When, on the other hand, we can obtain, as in Case 4, a history of steady subsidence of pain and swelling for weeks after a single acute attack it is our duty to trust to rest, at the same time keeping a vigilant watch on the patient. Spontaneous recovery is then highly probable.

Granville-place, W.

[2] Études Histologiques des Modifications de l'Utérus dans la Grossesse Tubaire.—Annales de Gynécologie et d'Obstétrique, vol. xliv., 1895, p. 241.

THE GYNÆCOLOGICAL COMPLICATIONS OF GONORRHŒAL INFECTION.

BY THOMAS MORE MADDEN, M.D. TEXAS, F.R.C.S. EDIN.,

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THE far-reaching gynæcological and obstetric results of gonorrhœa are still not infrequently insufficiently recognised. In the hope, therefore, of directing further attention, not only to the importance of these complications, but still more to the timely detection and treatment of the infection whence they originate, I now submit the following brief observations, founded on a long clinical experience of various chronic vaginal, cervical, endo-uterine, tubal, and other intra-pelvic complaints thus occasioned that have come under notice in my wards.

The greater prevalence of diseases of this kind in hospital than in private practice is, I think, unquestionable, and is explicable by the unclean personal habits and neglect of prophylactic treatment too generally observable in the former class of patients. In some of the instances of the kind observed in my hospital the disease was distinctly and immediately traceable to the recrudescence, under the stimulus of sexual intercourse, of an infection contracted prior to marriage by the patient's husband and suffered to run on into an ignored chronic, slight gleety discharge containing those specific and still pathogenically active micro-organisms by which gonorrhœa is communicable. More usually, however, the infection so conveyed is not recognised until its remote consequences are brought under gynæcological observation, its earlier non-detection in these cases being due, firstly, to the common occurrence of non-specific hæmorrhagic discharges from the vulvo-vaginal mucous surfaces as well as to their comparatively lax structure, owing to which it is that, save where the infective virus is exceptionally intense and is chiefly localised in the more sensient tissues of the vestibule and meatus urinarius, women thus infected seldom manifest those evidences of

local inflammatory action—scalding in micturition, pain in coitus, glandular complications, febrile disturbances, &c.—which generally attend acute gonorrhœa in the male. The differentiation of gonorrhœal from non-specific inflammatory or catarrhal exudations of the female genital mucosa is, as I have elsewhere pointed out, oftentimes a matter of no little difficulty and importance. In both cases the local condition may give rise to discharges from the mucous membrane of the urethra and bladder as well as from that of the vulvo-vaginal walls, which can only be distinguished with absolute certainty by the recognition of the gonococci of Neisser in the cases that are gonorrhœal. Frequently, however, this test is not practically available, and, further, it is not always reliable, as that gonococcus is by no means invariably accurately distinguishable, at least by immediate microscopic examination or without a process of cultivation, from those other micro-organisms with which it might be confounded. The time requisite for the latter or culture test is quite sufficient to preclude its utility as any help in such cases to the practitioner requiring some immediate guidance as to the necessity for the use of those germicidal agents on which alone he can rely for the averting of the remote gynæcological consequences of gonorrhœal infection. Under such circumstances, therefore, our judgment should be grounded on the history, the symptoms, and even to some extent on the probabilities of the case, rather than rest, as some suggest it may do, on an exclusive dependence on bacteriological evidences, which, however valuable in many instances, in a still larger number must prove fallacious as a means of diagnosis and useless as an indication in treatment. Moreover, for the latter purpose, at least, a sufficient approximation to accuracy may generally be arrived at without any microscopic examination. Thus, for instance, if a vulvo-vaginal exudation be distinctly muco-purulent in character, attended by well-marked localised inflammatory action, hyperæmic tumefaction, and tenderness in the vicinity of the meatus urinarius, with a peculiarly viscid discharge therefrom and dysuria, there can be little question of the expediency of treating the case as one arising from gonorrhœal infection. At the same time we would not be justified on such evidence in formulating any *ex cathedrâ* diagnostic pronouncement. For, as I need scarcely reiterate, in cases of this kind, in which, as sometimes happens, our patients' domestic happiness as well as physical health may be involved, our opinions should not only rest on the largest data available and be carefully weighed, but also, above all, they should always be expressed with the utmost possible caution.

The consequences of unchecked extension of gonorrhœal infection from the vulva to the adjacent parts can here be only very briefly glanced at. In the first place, as the disease progresses the calibre of the genital passage soon becomes sensibly diminished by the congestive hypertrophy of its specifically irritated lining membrane and by the accompanying hyperæmic condition of the sub-mucous tissues. The vaginal surface may now be found bathed in a more or less profuse mucoid or muco-purulent discharge containing gonococci, by which the disease is ere long carried from the roof of the vaginal vault to the contiguous mucosa of the vaginal portion of the cervix and thence to the endometrium of its canal. The results of this now become evinced in the causation of many cases of dysmenorrhœa and sterility, which in some instances are obviously due to the spread of the gonorrhœal inflammatory action from the muciparous follicles or glandulæ Nabothi to the underlying structures of the cervix and the consequent occlusion or impaired patency of its duct by plastic exudations. Of still greater importance in this connexion are the immediate pathological effects of the specific contamination of the cervical mucoid secretions occasioned by gonorrhœa. Under normal circumstances the crystalline mucus acts as the natural lubricant of the canal and as a protection in the intervals of the catamenia against the admission of pathogenic germs to the uterine cavity, whilst at the same time serving as a suitable medium for the transmission of spermatozoa and also as a seal to its orifice during pregnancy. When, however, that secretion becomes distinctly abnormal or infected by gonococci not only are these functions necessarily impaired, but, moreover, the pathological discharge becomes a direct source of irritation or erosion of the cervix, as well as of dysmenorrhœa, and, above all, of sterility. The latter result is apparently directly consequent in such cases on the destruction of the spermatozoa by the infective micro-organisms then contained in the cervical mucus. This view has been sufficiently confirmed by my experience of many instances in which the cure of sterility as well as of its immediate gonorrhœal cause has been effected by thorough curettage of the cervical canal followed by the local application of germicidal agents and the use of salol bougies. If the infectious disease be not thus arrested before it has passed the cervical zone its results, as I have elsewhere shown,[1] are evinced in the causation of a large proportion of the cases of chronic endometritis that come under our notice. Of still graver pathological importance is the further extension of gonorrhœa beyond the endometrium and the consequent induction of those tubal, ovarian, or other intra-pelvic lesions to which a brief reference must here be made.

The diagnosis of gonorrhœal from other forms of chronic salpingitis as well as that of the consequent tubal collections—i.e., pyo- or hyo-salpinx—must rest as largely on the history and general symptoms of each case as on the bacteriological evidence which in some instances may be afforded by the detection of gonococci in the accompanying cervical or vaginal discharges. Of the earlier symptoms of gonorrhœal, as well as of non-specific, salpingitis, probably the most constant are the persistent recurrence of otherwise inexplicable attacks of menorrhagia and metrorrhagia, associated with dysmenorrhœa in the intervals, between which attacks a deep-seated acute or lancinating intra-pelvic pain, shooting out into the sacral and inguinal regions or extending down the thighs, is generally complained of. As the disease goes on evidences of pyrexial disturbance, sudden alternations of temperature, a spiky clinical chart, and pyogenic rigors become observable, and are often attended with intra-menstrual hæmorrhagic or watery mucoid discharges from the uterus, whilst a little later local tumefaction and tenderness, discoverable by conjoint recto-abdominal exploration, in the course of the oviduct may disclose the existence of pent-up purulent or serous collections in the infected tube. The frequency of the extension of gonorrhœal infection from the oviducts to the ovaries, although disputed by some authorities, appears to me to be unquestionable. At any rate, whatever may be the case elsewhere, in my wards at least acute inflammation of the ovaries has been brought under notice as a consequence of that infection almost as commonly as from puerperal and other septicæmic causes, being, in fact, as Sir Spencer Wells observed, "probably of more frequent occurrence than acute orchitis is in the male." The chief symptoms of this condition are a localised, continuous, dull aching pain, extending its area and increased on touch or motion, together with a directly recognisable enlargement and tenderness of the implicated gland. This condition in its acute stage is invariably attended with well-marked constitutional or febrile disturbance, and subsequently, as the disease becomes chronic, with a long train of menstrual derangements and neurasthenic disorders which are not infrequently misascribed to other causes. The latter or chronic form of gonorrhœal oöphoritis may, moreover, if neglected, lead to serious structural local changes, including suppuration, softening, or even complete disintegration of the stroma of the affected organ. In some cases I have seen the ovary itself converted into a thin-walled pyogenic cyst containing a quantity of intolerably fœtid pus. In one of these instances the cyst eventually ruptured into the peritoneal cavity and so proved fatal. In another case this result was averted by the timely removal of a similar collection. Fortunately, however, the consequences of chronic gonorrhœal oöphoritis are by no means generally so immediately grave as in the cases just referred to, more common results being chronic enlargement from congestive hypertrophy of the affected glands with consequent menstrual derangements and infective hyperæmic changes in the adjacent pelvic peritoneum, whilst in some instances of this kind the ovaries ultimately become nodular and atrophied and ovulation ceases.

With reference to the other intra-pelvic complaints of which gonorrhœa is a fertile source I shall only here observe that long clinical experience has convinced me that in a large proportion of instances peri-uterine phlegmon, or in other words all those chronic inflammatory lesions of the pelvic serous and connective tissues formerly included in the term pelvic cellulitis and subsequently better known as peri-metritis and parametritis, may be found traceable to that

[1] Vide Clinical Gynæcology: a Handbook of Diseases of Women. London and Philadelphia, 1893, p. 350.

infection. I regret that the limits of space available prevent my now referring in the way I had designed to this topic, as well as to the no less important puerperal complications arising from the same cause which are frequently met with in obstetric practice, or even to the general treatment of gonorrhœal gynæcological complaints. In this connexion I may, however, venture to express the conviction that in dealing with possibly suspicious mucoid as well as muco-purulent discharges from the female genitalia it will, as a general rule, be found safer for the practitioner, without expressing his opinion, to treat the case as gonorrhœal. Nor should he, I think, wait for that certainty which may be obtained from the recognition of gonococci before resorting to the free and frequently repeated daily local use of efficient germicidal agents such as bichloride of mercury (1 in 2000), creoline (1 in 200), or lysol (1 in 100), these solutions being employed conjointly with insufflations of loretin not merely until, but for a considerable time after, every trace of the disease has apparently subsided. In this way alone can we ensure that if the case should be gonorrhœal our patient may be saved from the possibility of those complications which have been referred to in this paper; whilst on the other hand, if the discharge be simply leucorrhœal that plan of treatment can do little if any harm in any case and in the majority of instances will probably prove the most efficacious that could be adopted.

In conclusion I have only to reiterate the hope that even this necessarily brief and incomplete recapitulation of the gynæcological consequences of gonorrhœa may perhaps in some measure serve to accentuate the special importance of the earliest possible detection and prompt curative treatment of that disease in women.

Dublin.

A RECORD OF

CASES OF PNEUMONIA, PLEURISY, AND ACUTE RHEUMATISM OCCURRING AMONGST 400 ADOLESCENTS DURING A PERIOD OF TWENTY-FIVE YEARS.

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IN the issue of THE LANCET of Feb. 15th, 1896, I placed before the profession an account of the common sore-throats of adolescents. I now propose to record a complete series of cases of pneumonia, pleurisy, and acute rheumatism which have occurred amongst an average of 400 boys (to be quite exact the number is 403), ranging from thirteen to nineteen years of age, during a period of twenty-five years, and also the mortality therefrom.

Pneumonia.—The number of cases of pneumonia arising during this period was forty-four, with only one death, giving a mortality of 2·27 per cent. The cases were secured and transferred to the sanatorium at the earliest possible moment, and placed under the supervision of a day and a night nurse. The large number of cases which occurred during the year 1891 (and the following years) arose from the influenza epidemic. Now every case of influenza was as carefully isolated as if it had been scarlet fever, and, however slight the illness, was retained in bed for a minimum of five days, taken care of for five days more, and then disinfected as thoroughly as if it had been scarlet fever before returning to school; yet, notwithstanding all this care, there arose during that year alone twelve cases of pneumonia out of eighty-nine cases of influenza, a proportion of 1 in 7·4, evidencing the severity of the epidemic.

Pleurisy.—In the same number of years there appeared twelve cases of pleurisy with one death, giving a mortality of 8·33 per cent. During the influenza epidemic two cases of pneumonia were followed by empyema, which rapidly recovered after resection of a rib, and one by pleuritic effusion which did not recur after an early paracentesis.

Acute rheumatism.—It will be observed that the number of cases of rheumatism apparently largely increased after the year 1881. The reason was this. It is a well-known fact that the outward and visible signs of acute rheumatism in the young are frequently exceedingly slight, so vague as to be too often ignored until it is too late. In 1880 I had a case of endocarditis arise in a boy who had merely a little aching in a muscle, which I recorded in THE LANCET of that year. I then resolved that if increased precautions could possibly obviate this catastrophe no boy should ever leave school again maimed by a damaged mitral valve. Since that date I have therefore sent to bed in hospital every boy who had the merest muscle or joint ache which had not manifestly arisen from a hurt, and have detained him until it was quite clear that his pain was not rheumatic. I have been amply rewarded for this increased care, for out of eighty cases admitted with slight aches which might possibly be attributed to rheumatism only one manifested a soft mitral murmur, which completely disappeared before I set him at liberty. This increased number of cases, therefore, means greater precautions, only twenty-nine out of eighty being detained in hospital over a week, most of them remaining only a day or two.

TABLE I., *showing the number of cases of Pneumonia, Pleurisy, and Acute Rheumatism occurring amongst 400 Adolescents between Jan. 1st, 1871, and Dec. 31st, 1895.*

Year.	Number of cases of pneumonia.	Deaths from pneumonia.	Number of cases of pleurisy.	Deaths from pleurisy.	Number of cases of acute rheumatism.	Deaths from rheumatism.
1871	2	—	1	—	2	—
1872	—	—	1	—	3	—
1873	4	—	2	—	1	—
1874	2	—	—	—	1	—
1875	1	1	1	—	2	—
1876	—	—	—	—	—	—
1877	2	—	2	1	1	—
1878	1	—	1	—	2	—
1879	—	—	—	—	2	—
1880	—	—	1	—	3	—
1881	—	—	—	—	1	—
1882	—	—	—	—	5	—
1883	4	—	—	—	10	—
1884	1	—	—	—	7	—
1885	1	—	—	—	8	—
1886	—	—	—	—	5	—
1887	2	—	1	—	4	—
1888	—	—	—	—	1	—
1889	—	—	—	—	8	—
1890	1	—	—	—	5	—
1891	12	—	1	—	8	—
1892	—	—	1	—	5	—
1893	4	—	—	—	5	—
1894	3	—	—	—	5	—
1895	4	—	—	—	3	—
	44	1	12	1	97	—

TABLE II., *showing the cases of Pneumonia, Pleurisy, and Rheumatism occurring amongst 400 Adolescents between Jan. 1st, 1871, and Dec. 31st, 1895.*

Disease.	Total numbers.	Average number of cases per annum.	Per cent. per annum.
Pneumonia	44	1·76	0·44
Pleurisy	12	0·48	0·12
Rheumatism	97	3·88	0·97

Rugby.

MR. F. G. LLOYD, surgeon to the *Harlech Castle* and surgeon in charge of Dr. Jameson's men from Natal to Plymouth, has received a vote of thanks from the directors of the Chartered Company, together with a handsome recognition of his services to the sick troopers.

AN INQUIRY INTO

THE PHYSIOLOGY OF THE ACTION OF THERMAL SALINE BATHS AND RESISTANCE EXERCISES IN THE TREATMENT OF CHRONIC HEART DISEASE

(THE NAUHEIM AND SCHOTT SYSTEMS).[1]

BY R. F. C. LEITH, M.B., B.SC., M.A., F.R.C.P.EDIN., &C.,
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(*Continued from page 761.*)

THE PULSE.

THE alterations in the pulse may be estimated by the finger or sphygmograph, preferably the former. Sphygmograms are useful for recording purposes and save descriptions, but a too minute reading of them is apt to lead into error. The following agents are all brought into action by the bath—viz., rest, temperature, water, salines, and carbonic acid—and I have endeavoured to test their separate as well as combined effects upon the pulse by trying each in turn.

1. *Rest.*—The patient is enjoined to enter the bath quietly, lie down at once, and remain without moving during the whole period of immersion. Rest is thus secured, and in order to test its effect in a comparable manner I first caused a healthy person to lie quietly upon a couch for fifteen minutes. His pulse diminished in rate and increased in strength. I find this to be even more marked in cases of diseased hearts. Simple changes of posture from the erect to the reclining position, as is well known, are enough in many cases to effect a slight change. The effect of the rest alone is therefore distinct.

2. *Temperature.*—The temperature of the baths varies between 95° and 86° F.; an air bath of 95° feels considerably warmer than a water bath at the same temperature. Something between 85° to 90° is probably its equivalent. By means of a tent bed, in which the disrobed patient lay, his head being uncovered, I succeeded in testing the effect of an air bath of about 90°. The results were rather indefinite. If the temperature rose to about 95°, as it sometimes did, the pulse was slightly increased in rate, whereas if it remained about 90° it was slightly diminished; if it fell a little lower the pulse diminution became more marked. At or about 90° it appeared to be much the same or a little less than was formerly obtained under rest alone, while at 85° or less it seemed to be rather more. This appeared to show that temperatures between 90° and 95° were indifferent, while those under the former figure had a certain definite action.

3. *The simple thermal bath.*—In this we have the special mechanical and physical properties of the water added to those of the temperature and rest. The pressure which the weight of the water mass exerts upon the body of the bather is considerable. To the usual atmosphere the weight of the water is added. Mauther says the increase for a column of water two feet high is equal to one-sixteenth of the atmosphere pressure, or about 2280 lb. more than in ordinary air. If we are to judge by the sensations of the patient, a bath of 95° F. feels considerably colder than air at this temperature, the latter being more nearly equivalent to a bath of 105° or thereabouts. I do not know, however, whether we can say that the temperature effect of a bath at 95° is greater than the mere difference between its temperature and that of the body would warrant. The effect of a bath at this temperature continued for fifteen minutes was usually greater than that of an air bath five degrees lower or of rest alone. The difference became more pronounced as the temperature was lowered. At a temperature of 90° a diminution of pulse-rate of from five to seven beats in a minute with an increase in strength was quite common.

4. *The saline bath.*—Sodium chloride was next added to the bath in the proportion of 1 to 3 lb. to the 10 gallons in different cases. Its effect was generally to emphasise the change in the pulse and to make the bath more agreeable to the patient. This was more noticeable in the stronger baths, which are considerably stronger in salt than sea water. The bath was spoken of as warmer and more stimulating than the simple thermal one. Calcium chloride and barium chloride were next added, first separately and then together, in the proportion of 1½ to 2 oz. to the ten gallons without any appreciable effect. Their action without the previous addition of sodium chloride was then tested with a similar result.

5. *The carbonic acid.*—This was usually added to the baths by means of Sandow's tablets, first recommended to me by Dr. Bezly Thorne. Its action was generally quite decided and led to a further diminution in the rate and increase in the strength of the pulse. When added to a simple plain water bath its action was very nearly if not as pronounced as when the salines also were present. It added a pleasantness and buoyancy to the bath very agreeable to the patient, and considerably increased the sensation of warmth. Its presence undoubtedly enables lower temperatures (86° F.) to be more readily borne.

All the factors at work seem to have a certain amount of influence and the final result may be regarded as due to the summation of their actions. The temperature as administered through the agency of the water is probably one of the most important of these, as its effects are extensive and far-reaching. Temperatures below body heat applied to the skin cause a contraction of the cutaneous vessels over the part affected, higher temperatures causing dilatation. This result is brought about partly by a direct action upon the walls of the vessels themselves and their local nerve mechanism, and partly by reflex action through the nervous system. Alterations in the calibre of the cutaneous vessels must affect the amount of the lymph stream, and hence the nutrition of the surrounding tissues and even the flow through the veins and lymphatics. As the whole body is immersed, the area affected is a most extensive one. Further, there is reason to believe that the internal vessels are also affected, and that extensive cutaneous vascular contraction is always accompanied by a certain amount of internal vascular dilatation and *vice versâ*; and according to the experiments of Schüller this is also true of that part of the body not immersed—viz., the head. He observed the vessels of the pia mater in rabbits after trephining the lateral walls of the cranium at both sides of the sagittal suture, and found that cold baths produced dilatation of the vessels in proportion to the extent of the body immersed, while warm baths had the opposite effect. Winternitz believes that his plethysmograph experiments corroborate these results and that the contraction produced by thermal influence in a large vascular district causes compensatory dilatation of the vessels in other parts of the body. The plethysmograph registered an increase in volume of the arm during a cold sitz-bath, and the opposite during a warm one (95° F.). It will be remembered that this latter temperature is that recommended by the Schott system as most suitable for the commencement of a course of the baths. As it is slightly under the temperature of the skin we would expect that its thermal influence if any would lead to a slight contraction of the cutaneous vessels. Instead of this a definite dilatation was given, and it is probably to be accounted for by the definite fall in cutaneous temperature caused by disrobing. This would apparently mean a certain contraction of internal vessels, especially of those of the brain. The regular recurrence of these vascular changes might readily enough bring about certain changes in nutrition and tissue metabolism which may come to have an important influence upon abnormal processes. We need not stay to consider the tissue changes, if any, consequent upon abstraction of heat from the body during the bath. The local cutaneous mechanism called into play prevents any reduction in the temperature of the body from such moderate degrees of temperature changes as we employ. The influence upon sweat secretion must be noticed. During the period of immersion both insensible perspiration and sweat secretion cease. They may, however, be increased afterwards. Whether this has any local action or not it is difficult to say. Heymann and Krebs believe that it saturates the nerve endings and diminishes their excitability. Perhaps it in a measure explains the increased diuresis so frequently observed after the bath. All these actions are more or less independent of the nervous system and there can be no doubt that there are further actions specially referable to its influence. All thermal influences affect the cutaneous terminations of the ordinary sensory nerves and thus reflexly the vaso-motor and cardio-inhibitory centres. There is no reason to believe that

[1] A paper read before the Edinburgh Medico-Chirurgical Society, Jan. 15th, 1896.

such slight stimuli as our system uses afford any exception to this general physiological law. There will consequently be a slight tendency towards dilatation of the cutaneous vessels of the body generally and a contraction of those of the head accompanied by a slight stimulation of the cardio-inhibitory centre which will tend to increase the strength and slow the beat of the heart. But we have further to consider the influence in this relationship of the various chemical constituents which the bath contains. It is held by many that its saline ingredients act mainly by direct nervous stimulation, and the pleasant warm stimulating sensation experienced by the patient is pointed to as a proof of this contention. Those of us who have experienced the pleasurable tingling, stimulating sensations which follow a dip in the sea are perhaps too readily inclined to support this. The conditions are far from being similar. The average sea temperature is little over 50° F., and much that we may be inclined to attribute to the salt is really due to the thermal influence. It is easy to see how the sodium, calcium, or barium chlorides, especially the first named, may have some little influence in virtue of the increase they give to the specific gravity of the water and the encouragement they may give to exosmotic action. It is mainly, however, a physical or mechanical action and not a chemical one. The histological structure of the skin makes the possibility of a direct stimulation of the sensory nerve endings very difficult of acceptation. It is allowed on all hands that no absorption of mineral salts occurs through the skin, but it is maintained by Schott, Keller, and others that a certain imbibition by the skin is possible whereby the chemical ingredients are brought in contact with the cutaneous nerve endings. Schott supports his view by saying that when the skin is bathed with plain water after a saline bath the salt continues to come away for a much longer time than one would expect if it did not penetrate for some distance into the skin. Ranvier's investigations have shown that these nerve endings are not confined to the corium, as was generally believed, but are distributed within the deeper layers of the stratum Malpighii. Even so, however, the mineral salts have a considerable thickness of epidermis to pass before they are reached, and it is difficult to understand how they can percolate through these layers and yet avoid the lymph channels which lie between the prickle cells external to the nerve endings. Would not an entrance into these lymph channels mean a transference into the lymphatics of the true skin and an absorption into the system, which is denied by universal experience? I find it, therefore, difficult to follow Keller's explanations of the observations he carefully made upon himself. He found that a 3 per cent. sodium chloride bath at 93° F. and of thirteen minutes' duration has (1) a distinct diuretic effect and produces a marked increase of the chlorides of the urine, while plain water baths have the opposite effect; (2) a diminution of phosphoric acid; and (3) no appreciable influence upon the nitrogenous waste Robin, on the other hand, finds that they increase the nitrogenous metabolism and the oxidation of the products of the retrograde metamorphoses of the albuminoids.

Dr. August Schott, in the laboratory at Breslau, made certain observations upon shaved rabbits. He used a bath with a movable partition dividing it into two chambers, one containing plain water, the other a 10 per cent. salt solution of the same temperature. By raising the partition so as to allow the latter to mix with the former he found that the blood pressure of the animals immersed therein rose 5 to 10 mm. These results have not, so far as I know, been corroborated and must be received with caution. It is conceivable that the delicate operation of shaving a rabbit—animals that are apt even under the most favourable circumstances to prove unsatisfactory subjects for blood-pressure experiments—may have something to do with the result. I cannot say that, so far as the ordinary methods of observation went, my cases disclosed any sign of special stimulation brought about by the pressure of the salines beyond the subjective sensations of the patient himself. The increase they produce in the specific gravity and their influence upon osmotic action in connexion with the skin may, indeed, be the only influence they call into play. I have endeavoured to estimate their effect upon the vascular system by means of the plethysmograph, using Dr. Milne Murray's water manometer as the recording instrument. I wish to record my grateful thanks to him and Dr. Noël Paton for much valuable advice and assistance in this part of my experiments. So far my observations have not been very definite. They were made upon two different individuals, one a lad aged eighteen years and the other an adult male, both healthy. With the patient sitting in an ordinary full-sized bath, water at 95° F. was gradually run in until it entirely covered the legs and pelvis to the level of the anterior superior iliac spines. The plethysmograph recorded practically no change, so that if both these and Winternitz's observations are to be depended on a different effect would seem to be produced by a rapid and by a slow immersion, to be accounted for probably by the cutaneous mechanism becoming accustomed to the stimulation. The effect of salines and of carbonic acid was tried only in one of the cases. Sea salt was added in the proportion of 7 lb. to about 25 gallons of water at a temperature of 90° F. for a duration of several minutes and gave a negative result, the plethysmograph showing neither rise nor fall. The same result followed upon the addition of one pound of calcium and three-quarters of a pound of barium chloride respectively to the same quantity of water, over fifteen minutes being allowed for their effects to become established. So far as those observations go—and they have been too limited to be more than suggestive—they seem to corroborate those made on other lines. The salines would appear to have no direct influence upon the vascular system. It cannot be said, however, that these experiments test in any way their influence upon the nervous system, except perhaps in rendering improbable an ordinary stimulation of sensory nerves. If the large tract of cutaneous nerves subjected to the possibility of stimulation by the salines had been effected, might we not have expected some contraction of the vessels of the arm as the result of stimulation of the general vaso-motor centres? On the other hand, if we place any reliance on the evidence so extensively brought forward by physicians to show that salt-water baths and douches are of very great value in the treatment of various nervous derangements we must allow that some form of nervous stimulation would appear to be possible. Whether this may be brought about by electrical contact currents, or mechanical influences, or both, which would naturally vary with differently constituted fluids, I am not at present in a position to determine.

The effect of carbonic acid was next tried, the salines being present and the temperature 86° F. A very brisk effervescence was at once obtained by means of Sandow's tablets and kept up for ten minutes or more. A small and regular diminution in pressure at once showed itself and continued to increase so long as the record was taken. This showed a contraction in the volume and thus an increase of pressure in the arm. (The plethysmographic tracings were exhibited.) In Schott's experiments, already referred to, he found that its addition raised the blood pressure 10 to 20 or even 30 mm. Riedlin writes enthusiastically of its influence and considers that it is the most potent curative agent in mineral-water baths. Its presence enables the body to be subjected to much lower temperatures and for longer periods. This he attributes to its stimulating effect upon the skin, by which it is absorbed, when the pressure under which it exists in the bath exceeds that of the CO_2 in the blood-vessels and lymphatics. Schott also supports its absorption under the same circumstances and believes that its action is mainly due to stimulation of the cardio-inhibitory and other centres. Röhrig, Brémond, and others believe that they succeeded in showing by experiments on animals that the skin can absorb gases, and that finely atomised watery solutions of various composition, or such in the form of gas or vapour, will penetrate the skin. If it be absorbed into the blood to any extent then doubtless it may exert some stimulating influence upon both the cardio-inhibitory and vaso-motor centres, judging by the effect of venous blood upon them. This does not follow as a matter of course, as there is the diminution of oxygen to be considered, but I do not know that it is important enough to warrant further discussion here. I can hardly claim to have studied all the experiments made upon the action of CO_2, but so far as I have done so I have found no such clear proof as would enable me to maintain that it can be absorbed in the bath by the unbroken skin, nor do I think it necessary in order to explain its physiological effects. We have the bubbles of gas forming an almost continuous covering to the skin, so numerous are they; and though they are constantly being given off and replenished, yet this takes place only to a very limited extent over any given area at one time. The escaping bodily heat may thus be retained for a little by this layer, which will protect the body from the colder surrounding water. This may account in part for the marked feeling of warmth imparted to the skin by the effervescent bath. If the bather moves the layer

of gas is at once liberated over a large area and a cold sensation is immediately experienced by actual contact with the water. One would fancy that if the feeling of warmth were in any way due to absorption it would hardly disappear so suddenly on the slightest movement. Be this as it may, however, there is another and more important action. The bubbles of CO_2 are constantly impinging upon the skin and dealing it thousands upon thousands of little blows. The pharynx readily appreciates them every time we take a draught of effervescing water. The cutaneous nerve endings exposed to their action in the bath are actively stimulated. One result of this stimulation is probably a dilatation of the vessels of this area with a contraction of those in the rest of the body, brought about mainly through the influence of the general vaso-motor centres. This would explain the rise in blood pressure recorded by my plethysmographic observations and presumably also by Schott's experiments. The feeling of warmth experienced over the immersed area may be partly if not entirely due to this dilatation of its cutaneous vessels. There may even be other effects, as a slight stimulation of the cardio-inhibitory and respiratory centres, but it cannot, however, be too carefully remembered that just as the stimulus is gentle so also will its results be gentle, influenced though they may be to a certain extent by the irritability of the individual. The probability also of a certain amount of absorption of CO_2 by the respiratory mucous membrane must not be lost sight of, for the atmosphere which the patient breathes, his heart being just above the water, becomes steadily charged with CO_2.

Effect upon the heart.—The primary action upon the heart of stimulation by temperature has long been known, and Röhrig's experiments pointed to reflected impulse of innervation through the vagi as the cause, inasmuch as their division suspended it. The Drs. Schott believe that the baths act directly upon the heart in the same manner from the triple stimulation of the temperature, salines, and CO_2. Dr. Douglas Powell would seem to be of the same belief, as, in speaking of tachycardia,[2] he says: "And doubtless, as in the very analogous cases of exophthalmic goitre, the strong brine baths of Nauheim, by their stimulating effect on the vagus centres, will prove of value." Now, so far as the evidence before us goes we are led to think that the baths have very little influence indeed in this direction, and that such as it is it is attributable slightly to the temperature, chiefly to the CO_2, and but little, if at all, to the salines. The diminution in rate and increase in strength of the cardiac contractions brought about in this way must be very slight indeed and altogether inadequate to bring about any gross change in the size of the heart.

Effect upon respiration.—It becomes more active. It diminishes slightly in rate, but becomes markedly deeper, and it is to be remembered that deeper breathing is much more effectual than more frequent breathing in carrying off the products of a more active internal respiration. An increased elimination of CO_2 and moisture and an increased absorption of oxygen will thus be brought about. This will no doubt directly influence tissue metabolism and nutrition, but may also increase the ordinary influences of respiration upon the circulation, by the more oxygenated state of the blood affecting the vaso-motor centre, by its influence upon the heart and bloodvessels brought about by nervous action and by its direct mechanical effect upon blood pressure. Thus deeper inspirations promote the return of the blood-flow through the lungs to the heart and deep expirations have an opposite effect. I therefore doubt if this intra-thoracic action can have any appreciable effect, but the compression of the abdominal viscera ought to facilitate the return of blood to the heart and so stimulate it by increasing its endocardial pressure.

Effect upon the blood.—Winternitz and his assistants found that cold baths produced an increase of the red blood corpuscles, and also of the white, with a 14 per cent. increase of the hæmoglobin. The maximum effect was sometimes manifested an hour afterwards and lasted often for two hours. Warm baths had the opposite effect. He does not regard this as due to new formation, but to increased activity of the heart and circulation and improved nerve tone, the red and white cells being thus driven out of the organs in which they are accumulated. Kellogg obtained corroborative results and agrees with this explanation. Grawitz agrees with the results, but not with the explanation. He believes that warm baths cause the blood to be less concentrated, acting by a stimulation of the vaso-motor nerve apparatus, leading to a contraction of the vessels and preventing transudation of fluid into the tissues. So far as I have been able myself to try this method, I have obtained very little difference indeed from temperatures between 95° and 85°, a trifling increase, but nothing more. It would therefore appear that "the system" acts mainly by regularly repeated alterations in the blood pressure, the distribution of the blood, the osmotic actions and the various external and internal secretions. The natural ebb and flow between cutaneous and internal vessels is brought more systematically and regularly into play. Such changes may undoubtedly stimulate tissue metabolism and lead to the correction of vices and the establishment of improvements in general nutrition. The heart will participate in these improvements, and it is well known that its beat varies largely in consequence of changes in its own metabolism. There is no evidence whatever to support claims which maintain a great and direct influence upon the heart, whether by nervous channels or by greatly lessening the peripheral resistance. There is, indeed, every reason to believe that although the cutaneous vessels may be somewhat dilated, the general sum of arterial pressure and hence the peripheral resistance is actually somewhat increased. This seems to be entirely in keeping with the improvement observed in the cardiac conditions, for among the physical or mechanical circumstances of the heart which affect its beat the most important is perhaps the amount of distension of its cavities. The contractions of cardiac muscle, like those of any other muscle, are increased by the resistance, within certain limits, which they have to overcome. A full ventricle will contract more vigorously than one less distended, while if the limit at which resistance is beneficial be passed an over-distended ventricle will fail to contract at all. There is yet one other influence which must not be lost sight of in any summation of the different methods of action of "the system," and it is that of the mental factor, to which, however, I feel loth to refer, as we have no means of properly explaining or estimating it. The suffering lay or even medical mind is markedly susceptible to the influences of any line of treatment which can apparently offer such striking and rapid results by means so tangible, pleasant, and easily understood. A patient convinced of his daily improvement, and of his certain recovery in a few weeks later, is often already half cured. Much faith is a wonderful healer, and when it is accompanied by a complete change and pleasant society, such as it is the duty of a health resort to provide, it may work wonders, and we must be on our guard lest we give our treatment the entire credit of results which it may have had very little hand in producing.

It will be necessary to say but a few words further in special examination of the resistance exercises. The physiological explanation underlying their action is simpler than that of the baths, to which they may prove valuable adjuncts. They may indeed at times prove useful when the baths are contra-indicated, but on the whole they are inferior to them both in range of applicability and in efficacy. They are sensible and well thought out exercises, excellently suited to accomplish their purpose of bringing each group of muscles in the trunk and limbs into action in turn. They substitute regular and graduated movements capable of being perfectly controlled by the skilled attendant so as to suit a considerable variety of conditions, for exercise, often irregular, spasmodic, and ill-regulated, which the patient left to his own devices is apt to indulge in. When thus employed so as not to overtax the patient at any one time their physiological action resembles that of all other beneficial muscular exercise. There will be dilatation of the bloodvessels within the muscles, increased tissue metabolism, and more rapid elimination of effete materials. This will gradually bring about a better general nutrition. I cannot see how even the most gentle of such exercises can fail to press upon the veins and favour the return of the venous blood to the heart. Dr. J. F. H. Broadbent thinks that this may occur. It is an ingenious suggestion put forward to account for the diminution apparently observed in the size of the heart, which he believes is brought about by a lessening of peripheral resistance afforded by this means together with the vascular dilatation within the muscles. But if we deny this direct diminution in the size of the heart, as for the reasons already given I think we must, the suggestion becomes unnecessary, as also does the even more hypothetical and improbable one of Dr. Schott—viz., reflected vagal stimulation brought about by *afferent impulses* carried to the cardio-inhibitory centre by means of the *motor nerves*. We know of nothing which leads us to place such a difference

[2] Brit. Med. Jour., Nov. 10th, 1894, p. 1039.

between gentle and vigorous muscular exercise. They must both hasten the circulation, and favour, although in different degrees, the return of the venous blood to the heart. This will be most marked in the abdominal bloodvessels. Compression of the abdomen instinctively results with the employment of the resistance exercises. In this way an increased endocardial stimulation follows, and will naturally lead to an increased blood-pressure. It is possible that the vascular dilatation within the muscles is not compensated for by a corresponding contraction in bloodvessels in other regions, and is, besides, greater in amount than that of the increase due to the quickened venous flow. Some observations of Dr. Lauder Brunton in his Harveian Oration of last year seem to support this. There would in this case be an actual lessening of peripheral resistance and a diminution in blood-pressure, but this is rendered improbable by the decrease in rate and increase in strength of the pulse.

The physiological problems raised by "the system" are both many and complex, and there must be much still hidden from us which the future may reveal and which may bring about a more perfect understanding of its actions. So far as they are at present known to us it is readily seen that its scope of application is far wider than that of any individual drug; but to assert its applicability to all classes of cardiac derangements, reserving only advanced arterio-capillary sclerosis, aneurysms, and serious myocarditis, is surely in so many words to proclaim its impotence. It is but natural that it should fail. Evil habits of nutrition which measure their existence by months or years are not to be got rid of by one or even two courses of "the system" of a few weeks' duration at Nauheim or anywhere else. I have already met with failures and recurrences such as the present literature of the subject makes no mention of, and they have but served to increase my belief in its value when used in suitable cases. While we remember that it is capable of doing much good we must not forget that it is also capable of doing harm. It has now been sufficiently proved to warrant its trial in suitable cases, but they must be chosen with judgment. To use it rashly and with too great expectations is certain to lead to disappointment and to reflect injuriously upon the system itself. Moreover, as at present enunciated it does not seem to me to be as useful as it might be. It is at once too wide and too restricted: too wide in its claims and too restricted in its limitations. Why, for instance, should we pause at 86° F.? Why not go further in suitable cases and make use of the well-known effects of still lower temperatures, inasmuch as we can so easily regulate their influence by the duration of time we employ them? The resistance exercises are good so far as they go, but why should they not be combined with massage or passive or active exercises of different kinds? Eccles, Campbell, and others have testified to their value. An intelligent use of dumbbells and other gymnastic appliances ought to prove quite as effectual as the resistance exercises themselves, and they have done so in my hands in the opportunities I have so far had of putting them into practice.

I have herein endeavoured to lay before you the lines of a sound physiological working of this "system" which promises to prove a valuable remedy in many cases of chronic heart disease, but whether I have succeeded or not I am not without hope that I have prepared the way for the clearer understanding and appreciation of its applicability and usefulness.

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Edinburgh.

A CASE OF MOTOR PARALYSIS DUE TO CERVICAL CARIES TREATED BY LAMINECTOMY.

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AND

EDWARD COTTERELL, F.R.C.S. ENG.,

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A GIRL aged thirteen years was admitted into the West-end Hospital for Diseases of the Nervous System, Paralysis, and Epilepsy on May 4th, 1895, under the care of Dr. Wallis Ord, to whom we are indebted for permission to publish the case. The maternal grandfather had died from phthisis and the maternal uncle was paralysed. Three male cousins had died from scrofula and one male cousin (living) was affected with it. The father and mother and the patient's brothers and sisters were healthy. The patient was a fair-haired girl, well grown, with old disease of the cervical vertebræ. The pupils were widely dilated. There was paralysis of the right arm, not quite complete on the ulnar side, which is said to have come on nine weeks before admission and was attributed to chill. The right hand was cold and blue. There was no history of

epileptic fits. There was a mark of an old scar, due to the removal of an enlarged gland five years ago, on the right side of the neck, and some enlarged glands could be felt in the neighbourhood of it. There was no tenderness of the neck. On examining the pharynx by means of a finger introduced behind the soft palate a distinct projection forwards produced by the consolidation of the bodies of the cervical vertebræ could be felt. The head had become fixed eighteen months before admission and could only be slightly moved. The patient could feed herself with the left hand but by degrees lost power in it. Gradually she lost power in her legs, first in the right and then in the left, dragging them as she walked. On June 16th galvanism to the spine was ordered, but as she seemed to get worse under the treatment it was stopped. Mr. Cotterell saw the case towards the end of June, 1895, and found the girl was the subject of an old cervical caries, with a certain amount of consolidation and welding of the bodies in front. There was no evidence of any post-pharyngeal abscess or acute mischief of the vertebræ. As the paralysis was rapidly becoming worse laminectomy was decided upon, with the idea of relieving the pressure upon the cord. This operation was accordingly performed by Mr. Cotterell on July 1st, the laminæ and spines of the fourth, fifth, and sixth cervical vertebræ being removed. The dura mater bulged somewhat posteriorly when the laminæ were taken away. The most careful search in front of the spinal cord failed to find any button granulations or evidence of dead bone. The dura mater was not opened. The skin and muscles were brought together with sutures and the wound healed by first intention. The subsequent progress of the case was briefly as follows. On July 3rd she moved the left hand. On the 7th she moved the left hand and arm and held it up. On the 10th she moved slightly the right hand. On the 15th she could raise the right hand and arm above the head. On the 16th there was still more power in the right hand and arm. On Aug. 5th she sat up for an hour; both hands were cold. On the 8th the right hand was cold and the left hot. She had regained power in both legs. Soon afterwards she was discharged, but came to the hospital for examination on Oct. 25th. She had full power over the limbs and sensation was normal. There was no pain or tenderness of the neck. She could move the head, but only slightly. On Oct. 30th she was readmitted, and massage was ordered to the neck as there was still some stiffness; this disappeared under treatment. On Feb. 6th, 1896, Dr. de Watteville kindly tested the muscles of the right arm and forearm for us, and the following is his report: "Reaction of degeneration in all the muscles of the arm and forearm. Some of the intrinsic muscles of the hand still unexcitable to faradaic currents of fair strength. The nerve trunks begin to react to induced currents better than the muscles themselves."

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

RUPTURE OF THE TERMINAL EXPANSION OF THE EXTENSOR COMMUNIS DIGITORUM.

By WALTER KIDD, M.D. LOND.

THE Clinical Note by Dr. F. G. Wallace in THE LANCET of Feb. 29th under the above heading describes a small accident of a somewhat rare kind of which I have met with two cases. These may be worth recording, as they extend over a longer period of time than the case of Dr. Wallace, and in each case recovery took place, the power of extension of the ungual phalanx being regained long after all treatment had ceased.

In the more recent case a man about fifty-five years of age fell while ascending some steps, and putting out his right hand to save himself injured his ring-finger. I saw him within an hour or two of the accident and found the same condition as that described by Dr. Wallace—viz., that the terminal phalanx of the right ring-finger could not be extended beyond an angle of about 130°, and there were some swelling and pain in the joint. The finger was placed in a splint, and at the end of a fortnight this was removed and reapplied, as the joint was in the same faulty position and distinctly inflamed. After three weeks, no improvement being manifested, the patient refused to wear the splint any longer on account of the inconvenience occasioned by it in his occupation, which involved architectural drawing. Two or three months later the joint was still inflamed slightly and no more extension was possible than at first. When I last saw this patient, eight months after the accident, the joint had practically recovered its power of extension without further treatment. A similar result occurred in a similar case, the patient being a younger man, the power of extension of the finger being completely regained after several months, when all treatment had been suspended.

Blackheath.

AN ADDITIONAL SIGN GIVEN BY PLEURAL EFFUSION.

By T. H. KELLOCK, M.D. CANTAB., F.R.C.S. ENG.,
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ALTHOUGH as a rule the signs given by a collection of fluid in the pleura, whether serous or purulent, are definite enough to allow of an easy diagnosis, cases sometimes occur where the presence of lymph adherent to the visceral or parietal pleura, or thickening of the pleura itself, gives signs which so closely resemble them that the differential diagnosis becomes a matter of some difficulty; it is in such cases that I venture to think the presence or absence of the physical sign about to be described may be of use. The patient should be standing or in the sitting position, with the head and neck inclined forwards so as to render the skin and muscles of the back somewhat tense. The observer stands on the left side of the patient and, placing the left hand flat and fairly firmly on the lower part of the thoracic wall just below the nipple, percusses sharply either with a finger of the right hand or with a pleximeter on the ribs of the same side, striking them just posterior to the angles, when if no fluid be present a very slight vibration of the rib which is struck posteriorly is felt by the left hand in front, but if there be fluid in the pleura the vibration of the rib is much greater, and if the quantity of fluid be at all considerable the difference between the sensations experienced by the left hand when examining the sound and affected sides is most marked. This description as to position of hands, &c., applies, of course, to cases where the effusion is of some quantity, but by changing the position of the left hand and the spot where the rib is percussed posteriorly I have been able to elicit and demonstrate this sign where the quantity of fluid was small; it requires a little practice, but when once the sensation is thoroughly appreciated it is easily recognised again. In cases of bilateral effusion there is not, of course, the advantage of a sound side for comparison, but even in such experience may tell the physician whether or no the vibration obtained is greater than it should be. My own experience in this matter has been entirely confined to children, whose chest-walls are generally lightly covered and therefore favourable for the manifestation of this sign, but I hope that those who have the opportunity of trying it may find it of some service with adult patients also.

Great Ormond-street, W.C.

SUBLUXATION OF THE JAW IN A GENERAL PARALYTIC.

By FREDERIC P. HEARDER, M.B., C.M. EDIN.,
ASSISTANT MEDICAL OFFICER TO THE WEST RIDING ASYLUM, WAKEFIELD.

SEVERAL cases of subluxation of the jaw occurring during epileptic fits have been recorded in THE LANCET and elsewhere, but, so far as I am aware, never as occurring during a seizure in the course of general paralysis.

A man aged thirty-eight years was admitted into the West Riding Asylum, Wakefield, in May, 1893, suffering from general paralysis. In May, 1895, being then in the second stage, he had a series of slight epileptiform seizures, during one of which he sustained double dislocation of the jaw forwards. It was reduced with considerable difficulty, an anæsthetic being necessary to overcome the spasm of the muscles, which were above normal. His jaw also is massive. Since then he has several times dislocated the jaw and the reduction has been comparatively easy.

Wakefield.

A Mirror

HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

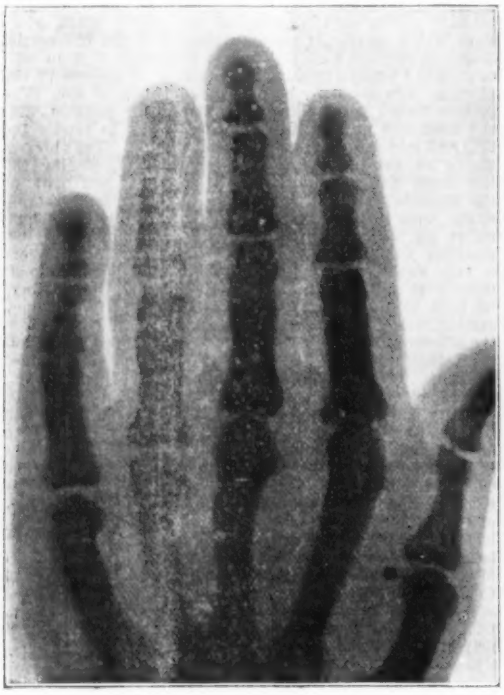
Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

A CASE OF ACROMEGALY.

(Under the care of Sir W. H. BROADBENT.)

NOT sufficient evidence is yet before the profession to make it possible to express a definite opinion upon the advantages to be derived from the administration of an extract of the pituitary body in cases of acromegaly. Sir William Broadbent's case improved under the treatment,



but the reservation made by Mr. Dodgson in reporting the progress of the case is a very proper one. The photographs are interesting as showing that the increase in bulk of the extremities was due to an overgrowth of the soft tissues, and not to any alteration in the bones, thus indicating a highly practical use for the new photography. It constantly happens that the exact remedial treatment of a limb—not in acromegaly so much as in many other conditions, tuberculosis for instance—depends upon a proper appreciation of the amount of structural change that has taken place in the bone: and the new photography should enable us often to arrive at that appreciation. For the notes of the case we are indebted to Mr. R. W. Dodgson, house physician.

A woman aged twenty-three years was admitted to St. Mary's Hospital on Feb. 8th, 1896. She complained of always feeling languid and sleepy and of progressive enlargement of the hands, feet, and face. Until three years previously she was of perfectly normal growth. She took size 3 in boots and her hands appeared to have been proportionally small. She always had the reputation of being a dunce at school, but managed to reach the fourth standard. She was otherwise lively and cheerful. About three years previously it was noticed that she was becoming languid and listless, frequently falling asleep at her meals. Her appetite became poor and she frequently suffered from nausea and vomiting, frontal headache, pains in the limbs, joints, &c. Previously her catamenia had been regular, but there had been complete amenorrhœa for the last three years. At the same time she noticed slight enlargement of the hands and feet, which had continued steadily ever since. Photographs taken during the last three years show this progressive enlargement. She had suffered from pain and tenderness in the feet on walking. There were numbness and impaired sensation in the hands, so that she frequently allowed things to fall. Her memory had failed a good deal. The enlargement of the face began about two years ago. Her sight appeared to have been normal until six months ago, when it began to fail. The family history was unimportant. On admission to hospital she was very dull and lethargic, taking considerable time to answer the simplest question. There was great enlargement of the hands and feet, the former having the characteristic spade-like appearance. The increase in the size of both the hands and the feet appeared to be almost entirely limited to their breadth and thickness, the length of the feet being only about a quarter of an inch greater than a foot taking an ordinary No. 3 boot. The enormous thickness and breadth can be seen in the illustrations, which are reproduced from skiagraphs. There was no enlargement above the carpus or tarsus. In the face the soft parts of the nose were enlarged and also the soft parts covering the upper and lower maxillæ. The ears and tongue were normal. The superciliary ridges were not specially prominent. The thyroid gland was somewhat enlarged. The mammary glands were not well developed. The skin was soft, pliable, and moist. The hair was somewhat coarse. There was complete homonymous hemianopia of the left fields of vision, the temporal side of the right and the nasal side of the left retina being quite insensitive to light. The right fields of vision, including the colour fields, were normal. There were no obvious changes in the fundi, or nystagmus. The pupil reflexes were normal

to accommodation and cutaneous stimulation, but there was hemiopic pupillary inaction to light stimulus on the blind halves of the retinæ. The skiagraphs of the hands and feet were kindly taken by Dr. A. P. Laurie and Mr. J. T. Leon, B.Sc., of St. Mary's Hospital. An exposure of three minutes for the hand and five minutes for the foot was allowed. It will be seen that the bones of both hands and feet appear to be normal in size, the hyperplasia being limited to the soft parts. The metatarsal bones are widely separated. On comparing these with skiagraphs of normal extremities the bones are seen to be about equal in size to those of a normal small-sized woman.

Remarks by Mr. DODGSON.—The case appears to be one of undoubted acromegaly, as it displays most of the classical features of this disease in a marked degree, and is of special interest inasmuch as it proves that the hyperplasia of bone tissues is not an invariable factor. The ocular symptoms are also of interest, homonymous hemianopia being unusual in this disease. This condition, coupled with the hemiopic pupillary inaction, would point to a lesion of the right optic tract, presumably pressure from a tumour of the pituitary body. The patient has been treated with tabloids of pituitary body and there has been considerable improvement in the mental condition; this, however, may be due to the relief of the obstinate constipation from which she suffered on admission.

TAUNTON AND SOMERSET HOSPITAL.

A CASE OF TETANUS TREATED BY TIZZONI'S ANTITOXIN; DEATH.

(Under the care of Mr. SAMUEL FARRANT.)

SOME months ago we reported in THE LANCET[1] a case of this disease treated by antitoxin obtained from the British Institute of Preventive Medicine. Death ensued on the fifteenth day after the commencement of the disease, but the treatment was not altogether without result, for it was noted that although the spasms did not cease they became markedly less numerous and less severe, but at the same time the patient grew weaker. In the following case there was no improvement apparent after the use of the antitoxin. For the notes of this case we are indebted to Dr. W. H. Maidlow, house surgeon.

A man aged twenty-four years was admitted to hospital in an alcoholic state on Feb. 9th, 1896, with a lacerated wound of the right palm and a compound comminuted fracture of the right leg at its lower third, both wounds being caused by the wheels of a heavy waggon. Not more than two hours after admission the leg was amputated through the upper third by lateral flaps and the hand carefully dressed, the ulnar artery requiring ligation. On the 10th the stump was dressed; there were signs of local traumatic gangrene. From this point this wound was daily irrigated and sloughs cut away, so that on the 22nd (at the time of death) it was beginning to look healthy. The wound of the hand never at any time looked unhealthy, but at the onset of symptoms of tetanus it was kept soaked in a 1 in 2000 solution of perchloride of mercury. The temperature between the 10th and the 17th varied from 101° to 99° F., but the man looked ill, with dark rings round the eyes, and there was a faint trace of albumin. On the 17th his jaws felt stiff; on the 18th there were obvious trismus and risus sardonicus and a transverse wrinkling of his forehead gave him a surprised look. Ten grains of antitoxin (British Institute of Preventive Medicine) some months old were injected. On the 19th spasms supervened on deglutition. Thirty grains of Tizzoni's antitoxin were dissolved in six drachms of distilled water and injected into the back. During the day increasing rigidity of the cervical muscles was noticed. As spasms occurred on deglutition and nasal feeding he was henceforward fed per rectum every four hours, with two or three pints of fluid by nasal tube, under chloroform, once daily. On the 20th the patient was worse. He had some sixteen attacks of general rigidity marked by extreme opisthotonos during the day, with trismus, risus, and cervical rigidity in the intervals, and profuse sweating. The temperature was 103°; a rash more like miliaria than the usual antitoxin (diphtheritic) erythema on the chest was also noticed. Ten grains of antitoxin were injected. On the 21st the attacks became more frequent, with great mental anxiety. Eleven grains and eight grains were injected with no relief. (After each injection no difference in the temperature was noticed; in fact, no difference in any respect was observable.) In the evening there was relaxation of the jaws and he could swallow almost painlessly; he preferred to pay some discomfort for a drink. During the night he became unconscious, the pulse failed, and he died cyanosed after a series of convulsions.

[1] THE LANCET, Dec. 7th, 1895.

Remarks.—As regards the treatment, all that can be logically said is that this particular case treated in this particular way showed not the slightest sign of any improvement, and it must take its place amongst the many other acute cases that have now ended fatally despite the remedy. The drug costs 45*s.*, per four and a half grammes against the 6*s.* for the same amount made by the British Institute of Preventive Medicine, but one would pay any price for a chance of relieving this heart-rending disease. In all fifty-nine grains were injected during the four days. No local effects were noticed; in fact, as stated before, the man might just as well, as far as signs were concerned, have had no antitoxin. The relaxation of the jaws noticed on the 21st has been noticed in cases not treated by antitoxin, and is probably a sign of muscular exhaustion, and may even be considered a bad augury. Seeing that the leg was amputated so soon after the injury it seems likely that infection came from the wound of the hand; the local gangrene, indeed, was most unfortunate, for the large area of suppuration must have militated against recovery, but at the operation the tissues cut through appeared to be healthy. No necropsy was made; no tetanus bacilli were found in either wound. At the inquest the coroner asked the pertinent question whether infection could have occurred from the previous case, but the bed had been well fumigated; this patient occupied another bed, and very many wounds treated during the intervening four months had done quite well. We did not consider amputation of the hand indicated with the patient in his then condition; probably no fresh poison was being absorbed. Should a similar case occur doses of double the quantity and intravenous injection would be worth a trial.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Antiseptics in Infantile Diarrhœa.—The Effects produced by the Retention of Foreign Bodies for Lengthened Periods in the Bronchial Tubes.

AN ordinary meeting of this society was held on March 24th, the President, Dr. W. HOWSHIP DICKINSON, being in the chair.

Dr. J. A. HAYWARD and Dr. CHARLES BUTTAR read a paper on Antiseptics in Infantile Diarrhœa. The object of the paper was to inquire into the part played by micro-organisms in the production or prolongation of infantile diarrhœa and how far the administration of antiseptic drugs could claim to be a rational mode of treatment. The significance of micro-organisms in the healthy alimentary canal of infants and adults was discussed in the light of experimental researches (chiefly by Brieger, Escherich, and MacFadyen), and disturbance of the equilibrium which obtained between their activity and life history and the normal digestive functions was suggested as a predisposing and exciting cause of diarrhœa. On the clinical side an attempt was made to justify the use of antiseptics in infantile diarrhœa, in spite of the incomplete though suggestive nature of bacteriological researches. Granting this justification, the necessity of forming some conception of the mode of action of bacteria as factors in the causation of diarrhœa was insisted upon before antiseptics could be employed rationally in treatment; otherwise misapplication of the remedy and confusion in noting the results were likely to occur. As a working hypothesis it was suggested by Dr. Hayward and Dr. Buttar that the mode of action of micro-organisms in connexion with diarrhœa might be arranged as (1) irritant, (2) toxic, and (3) infective, the ultimate effect in each instance being brought about by the harmful products of their activity. In support of this

classification reference was made to certain food-poisoning epidemics and their analogy with summer diarrhœa and cholera infantum was pointed out. The use of bearing this classification in mind in practice was shown. It was a help in deciding when antiseptics might be expected to be of service and when nothing could be expected from them. The best success was obtained by employing them in some of the acute forms of summer diarrhœa and in chronic diarrhœa when bacterial agency might be suspected as a factor in the initiation or prolongation of the disease. The evidence of bacterial agency was then briefly discussed from a clinical point of view, and, if present, how far it might be worth considering in treatment. The antiseptic treatment was discussed under two heads: (1) diet; and (2) antiseptic drugs. Under (2) the object of their administration was considered, the requirements essential for an intestinal antiseptic, the drugs which in part fulfilled these requirements, and certain points in their selection and mode of administration. Experimental researches by Dr. Hayward and Dr. Buttar as to the influence of some of these drugs on the growth in artificial cultivation of proteus, bacillus coli, and the bacillus isolated in the Portsmouth epidemic by Dr. Klein were brought forward. The paper concluded with some considerations which had been found useful by them in diagnosis, prognosis, and treatment in infantile diarrhœa. — Dr. DAWSON WILLIAMS said the profession should be obliged to anyone who attempted to introduce order into chaos when dealing with the diarrhœal diseases of infancy; but he doubted if Dr. Hayward and Dr. Buttar had materially advanced their knowledge of the subject, for 99 per cent. of the cases met with in hospital fell into their second class. The question raised long ago by Pasteur whether an animal could live upon an absolutely aseptic diet had curiously enough only been solved the other day. In Hoppe-Seyler's *Zeitschrift* it is related that an experiment performed with a guinea-pig resulted in success. After a preliminary abdominal section and cleansing the animal was fed on aseptic food and supplied with aseptic air. At the end of nine days the experimenters, worn out with watching, had to kill the animal, but it had meanwhile remained in health, gained weight, and was found afterwards to be quite aseptic. A certain amount of discredit had fallen on intestinal antiseptics because those who had first used them had talked of intestinal antisepsis which was impossible to obtain. In acute summer diarrhœa these drugs were of no use, but in the more chronic forms of diarrhœa they were of great value. He agreed that naphthalin was useful. He had obtained good results from salol, but that drug, so far as the intestine was concerned, was carbolic acid; and he thought that better results could be obtained by the use of carbolic acid itself. He differed from the writers who said that this drug was most useful in the upper intestinal canal, for, on the contrary, he had found carbolic acid most useful in cases which were presumably instances of colitis.—Dr. KINGSTON FOWLER related a clinical experience which he thought should make physicians careful of attributing improvement to the administration of drugs. He was called to see a woman who suffered from severe diarrhœa and a peculiarly offensive odour which not only impregnated the stools, but apparently came off from every part of the patient's body. He suggested that salol should be given in cachets and the patient should be removed to another house. The patient was removed, but the salol was given in tabloids. In three days the patient was practically well and fetor had disappeared from the motions, but in the latter all the tabloids were discovered undissolved and unchanged.—The PRESIDENT said that Dr. Hayward and Dr. Buttar had made no mention of foul gases as a cause of diarrhœa. He had seen many cases due to this and the best treatment was to move the child somewhere else, where there were different water, milk, and air. In the form of diarrhœa associated with very fetid motions he had seen the greatest benefit follow the administration of creasote.—Dr. HAYWARD, in reply, said that the insolubility of tabloids had driven him back to the administration of fluid drugs. He did not see how the mechanical removal of a child from one house to another would cleanse its intestine of pathogenic organisms.—Dr. BUTTAR also briefly replied.

Mr. R. J. GODLEE read a paper on the Effects produced by the Retention of Foreign Bodies for Lengthened Periods in the Bronchial Tubes. The following cases had been chosen as typical of the sort of result which might be anticipated if foreign bodies of different sorts were retained for periods of varying length in the bronchial tubes. 1. A boy aged sixteen years, who inhaled the peg of a peg-top seven years and a half before, and had developed bronchiectasis. Various operations were detailed that were undertaken for its removal, and the final expulsion of the peg-top peg through the opening made into one of the bronchiectatic cavities. The boy seemed to have recovered. 2. A boy aged six and a half years, inspired a small ivory knob, which was retained for eight weeks. It set up extensive bronchiectasis, but there was nothing to suggest the presence of any one large cavity, and thus it did not appear that anything was likely to be gained by surgical interference. The boy at first did not improve, but later reports were more favourable. 3. A boy aged four years developed bronchiectasis as the result of inhaling the vertebra of a rabbit seven months before. A cavity was opened. Ultimately the bone was coughed up. During the eight years that had elapsed much improvement had taken place, but there was still evidence of a basic cavity. 4. A youth aged seventeen years inspired an ear of corn into a bronchus. Acute dilatation of the bronchi and gangrene of lung, with burrowing of pus, supervened, from which the patient died. 5. Another case, previously reported, was referred to in which a tooth lodged in a bronchus set up bronchiectasis. Many attempts at removal failed, and the patient died of tubercle engrafted on to his primary disease. The pathology of these cases was briefly considered, and the advisability of making careful inquiries as to the possibility of a foreign body having been inhaled in cases of unilateral bronchiectasis was insisted upon. The question of prognosis was also dealt with and certain rules for treatment were laid down.—Dr. KENNETH MCLEOD referred to an instance which came under his notice in the Durham County Asylum some years ago. A delicate, demented lad was admitted with all the signs of phthisis, and it was thought during life that cavities existed in his left lung. He died ultimately from exhaustion and at the necropsy there was found lodged in the left bronchus a small piece of sheet tin, which had been folded up into a square with somewhat rounded edges and had a diameter of about a half to three-quarters of an inch. The lung below was in a condition of general bronchiectasis, the tubes being filled with muco-pus. The lung was indurated and condensed and there was no evident tubercle and no local ulceration opposite to the point of lodgment of the foreign body.—Dr. NORMAN MOORE mentioned that Dr. Richard Morton, in his "Phthisilogia," published about 1690, referred to the case of a man whose occupation it was to nail things up on walls and who breathed in three nails. It was a week before he showed any symptoms and he died in a month. From the description of the necropsy one could gather that the bronchi were considerably dilated and that there was extensive purulent pleural effusion. A man was admitted into St. Bartholomew's Hospital who "lost down his throat" the end of a clay pipe. He was attacked by coughing and died from hæmorrhage. Post mortem the end of the pipe was found sticking in the tissue behind the tonsil and it had induced sloughing which opened into the tonsillar artery. Another man entered St. Bartholomew's Hospital and one side of his chest was found to be resonant, but no breathing was heard. He died in three days, and the thick end of a pipe was found lodged in one of his large bronchi. There was no history of how it had got there. Gangrene of the lung proceeded very rapidly in that case.—Mr. WARRINGTON HAWARD said that the writer had enforced the necessity of persistently endeavouring to remove the foreign body when once it had gained entrance. The insignificance of the symptoms had often led to scepticism as to the inhalation or the swallowing of a foreign body. It should be remembered that the passage of a foreign body through the nose was one way in which it might reach the larynx, and he had recently removed such objects as a screw and the leg of a small china doll from the nostril of a child. A few days ago at St. George's Hospital a large and long vulcanite tracheotomy-tube became detached from its plate and dropped into the left bronchus of a man who was the subject of malignant disease of the larynx. The man suffered no inconvenience from the tube, and it was removed two days later through the tracheotomy opening by means of the forceps which had been made for Brodie to extract the half sovereign from Brunell's trachea.—Dr. SOLOMON SMITH mentioned the case of a child eight years of age, who was said to have "swallowed" the whistle of a toy balloon. It at first lodged in the throat, and when

he breathed it whistled, but the whistling sound disappeared after an emetic had been administered. There was found to be absence of respiration in the lower half of the right lung He was inverted and slapped, but nothing happened. After nine or ten weeks he began to get thinner, and after three days of cough and expectoration he brought up the whistle. This happened about twenty years ago, and fifteen years later he examined the patient for life insurance, and he could then find no trace of difference between the two lungs.—Dr. J. K. FOWLER said that the pulmonary changes were often extensive in these cases. The bronchiectasis was usually of the fusiform variety, the tubes being thickened and the surrounding lung indurated. It was often difficult to localise the exact position of a cavity. It could generally be taken for granted that if there was no definite history of pleurisy then there would be found no pleural adhesions. The symptoms usually followed a definite course, beginning with cough and expectoration, the latter becoming fœtid, then pleurisy and progressive emaciation, and later still diffuse broncho-pneumonia followed by gangrene. There was no doubt that every effort should be made to dislodge the foreign body as soon as possible.—The PRESIDENT wished to relate the details of two cases which had been under his notice at the Hospital for Sick Children more than twenty years ago. The first was that of a boy four years of age who "swallowed" a roasted pea; at least, he said that it jumped down his throat. One lung was found to be in a condition of bronchiectasis, and many attempts were made to get the pea out. Over a dull area a small exploring needle was passed in several times, and then a large aspirating needle was used, but with negative result. Later Mr. R. W. Parker, who was then house surgeon, was called up one night, and he found that the boy was dead on arrival. The death occurred four months after the inhalation of the pea. Post mortem the left lung was found in a condition of bronchiectasis, and the pea had occluded the left bronchus, lodging in a recess in its side; it had become dislodged from thence into the main air channel. In the second case a boy aged eleven had swallowed a piece of vegetable ivory belonging to a toy. He was seized with a choking, then came cough with fœtid expectoration of pus and blood, with signs of left bronchiectasis. Mr. Thomas Smith, Mr. Morgan, and Mr. Parker tried inversion repeatedly, and the boy was thumped on the back in this position until he was sick. Tracheotomy was afterwards performed, and he was again repeatedly inverted; a long wire armed with a hook was passed deeply down the tubes, but nothing was brought away. The boy got better and left the hospital, and after eight years Dr. Abercrombie saw him and found that he was expectorating a quantity of fœtid matter about six times daily, but was nevertheless in fair health, though he was undersized and his breath was constantly fœtid.—Mr. GODLEE, in reply, said that while the foreign body remained the child was always in danger of suffocation. Patients should not be inverted and shaken unless tracheotomy was actually done or was ready to be done. He endorsed the statement that very slight disturbance might follow the lodgment of a tracheotomy tube in the bronchus. Not long ago he saw a case in which a new vulcanite tube had become detached from its shield and had lodged in the bronchus. There were at first no signs, but after three days slight physical signs declared themselves. He then passed in a pair of long curved forceps through the tracheotomy wound and extracted the tube without difficulty.

MEDICAL SOCIETY OF LONDON.

Four Cases of Early Extra-uterine Gestation.—Ten Cases of Extra-uterine Fœtation.

AN ordinary meeting of this society was held on March 23rd, the President, Sir JAMES CRICHTON BROWNE, being in the chair.

Mr. ALBAN DORAN read a paper on Four Cases of Early Extra-uterine Gestation, which we publish in full in this issue.

Mr. HARRISON CRIPPS read a paper on Ten Cases of Operation for Extra-uterine Fœtation. He considered that it had not yet been established that extra-uterine fœtation commenced anywhere except in some portion of the Fallopian tube. As the fœtal sac enlarged it protruded either into the abdominal cavity or, growing downwards, separated the layers of the broad ligament widely. When rupture took place into the abdominal cavity the hæmorrhage was in a large number of cases very severe and not infrequently led to the death of the patient in a few hours. On the other hand, when the blood was poured downwards between the layers of the broad ligament it would spontaneously cease, as these could only be separated to a limited extent. A third condition, probably more common than either of the other two, was found. In this the blood was so poured out that it was encysted in Douglas's pouch. It was probable that in these cases some localised peritonitis was in the first place set up by a slight oozing or irritation, and thus the general cavity of the peritoneum was shut off before any extensive pouring out of blood occurred. When the sac burst into the peritoneum, pain, though severe, was not so intense as when the bleeding was into the broad ligament. On the other hand, the general symptoms were graver, doubtless due to a larger amount of blood being lost. These cases were almost invariably fatal if the bleeding was not arrested by abdominal section. Abdominal palpation failed to detect any tumour, but the abdomen was tender, and there might be dulness in the flanks. The finger in the vagina might detect some fulness in Douglas's pouch. In intra-ligamentous rupture the pain was usually more severe and of a paroxysmal character, resembling labour pains. Symptoms of hæmorrhage were not so marked. A tumour might be detected by abdominal palpation, and by vaginal examination the pelvis was found to be partly filled by a tumour, which was situated to one side of the uterus and displaced that organ to the other side. On rectal examination a marked constriction was often found about four inches from the anus. When the rupture took place into Douglas's pouch there might be an absence of the sudden acute pain followed by collapse, which was so characteristic of the other two varieties already mentioned. An examination per vaginam disclosed a swelling which lay behind the uterus in Douglas's pouch. As to the question of operation in ruptured extra-uterine fœtation, in cases of rupture into the peritoneal cavity these should always be operated on. In rupture into the broad ligament, if there were no evidence of any increase of the swelling, and if the general symptoms did not indicate a continuance of the hæmorrhage, such cases were best left alone. If, on the other hand, the symptoms of hæmorrhage continued, or if the swelling increased in size, with an exacerbation of pain, an operation should be undertaken. In hæmorrhage limited to Douglas's pouch, since the diagnosis must always be doubtful until the abdomen had been opened, Mr. Cripps did not hesitate to advise an operation. When the tube had ruptured into the peritoneal cavity he gave details of the operation he performed. The peritoneal cavity was afterwards thoroughly washed out. No drainage was as a rule employed. When rupture had occurred into the broad ligament or was limited to Douglas's pouch he related the procedure he adopted. If all the blood clot could be removed no drainage was employed, but if much ragged tissue was left behind a glass drainage-tube was used. In extra-uterine fœtation with a living child the following courses were open to the surgeon: (1) to operate at once and remove the fœtus; (2) to wait until near the natural time with a view to removing a living child; and (3) to wait till the death of the child after its full time. Mr. Bland Sutton's statistics seemed to show that unless untoward complications were present the operation should be deferred until after the death of the fœtus, this being the safest course for the mother. Notes of ten cases operated on by Mr. Cripps were given. There were nine recoveries and one death.

Dr. LEWERS said that the great point which frequently arose was what was the precise indication for operation in any case under consideration; for though a certain number would recover without operative treatment yet others presented acute symptoms and if left without operation might perish. He referred to a case he saw on March 19th. The patient was a woman aged thirty-four who had not menstruated for two months. Her last pregnancy occurred four years ago. For a fortnight she had complained of pains in the abdomen accompanied by feelings of faintness. On the 19th there was severe pain which produced faintness, so that she had to be assisted back to bed. On examination she seemed to be very ill; the uterus was enlarged and there was an indefinite swelling behind and to the right side. That night, the pulse being quicker and the patient worse, the abdomen was opened and was found to be full of clot; a rupture of the right tube was found which was still bleeding. The left tube was also dilated and contained blood, and so

both were removed. He put in a drainage-tube because some two years ago he had treated a case of similar character without a tube and the patient had a tedious convalescence. The appearance and feel of the breasts were often of value in assisting to form a diagnosis of early extra-uterine pregnancy.

Dr. ROUTH said that he had read a paper on this subject many years ago before the Obstetrical Society. Mr. Doran had implied that hæmatocele could not occur apart from pregnancy, but he had seen many cases which disproved this. One of the most valuable of the breast changes was the discolouration that occurred in the region of the areola. The discharges from the patient should always be carefully examined with a view to the discovery of a decidual membrane. He advocated the use of the binaural vaginoscope in doubtful cases.

Dr. LEITH NAPIER desired to speak from the point of view of diagnosis. In addition to a swelling on one side of the uterus there was often a marked pulsation in the uterine artery of that side, and the presence of this sign had helped him in one case to a correct opinion. He believed that there were cases of hæmatocele which were not due to ectopic gestation; there were many certainly in which the existence of pregnancy was "not proven." In one case shown by Dr. Griffith at the Obstetrical Society a decidual cast was passed and on the strength of it laparotomy was performed, but nothing was found, and the patient recovered. There was difference of opinion as to the treatment of the placenta; when it could be easily removed without alarming hæmorrhage it ought to be done; in other cases the cord should be cut short and the abdomen closed with gauze packing; in a few days the abdomen could be opened and the gauze removed.

Mr. BRUCE CLARKE said that the case referred to as recorded by Dr. Griffith was operated upon by himself. The diagnosis was arrived at on the ground that such an excellent decidual membrane was passed. He mentioned a case of acute peritonitis to which he was called which came on slowly and culminated in intestinal obstruction. He found a collection of pus in the pelvis, which he evacuated, and the abdomen was washed out. The patient gradually sank from exhaustion, and post mortem a ruptured extra-uterine pregnancy was found to be the cause of the suppuration.

Dr. HERBERT SPENCER remarked that the sac often appeared to be in the broad ligament, but a careful study of such specimens had led him to think that, like the so-called ovarian tumours of broad ligament, their boundary was really formed by adhesions. As to the nature of the cyst wall, he believed it to be formed by the organisation of the outer layer of the blood-clot, and such organisation could proceed extremely rapidly. It was remarkable that very few cases of early extra-uterine gestation died if left alone. A large proportion must terminate successfully without operation if one remembered the few cases one formerly saw post mortem. As to the treatment of extra-uterine gestation with living fœtus, these were rare cases. He had himself seen two which terminated fatally. In future if he met with a case in which the sac contained a living fœtus he would operate at once. In the first case he had seen there was great pain and the head was in Douglas's pouch. He cut down on to the placenta, which he rapidly removed entire, but there was furious hæmorrhage. This was arrested by sponge plugging, but the patient died of syncope the same night. In the second case there was a living fœtus of the fifth month, when the first signs of pain occurred. At the seventh and a half month there were signs of rupture of the sac, and he operated, cutting off the cord close to the placenta, but not detaching the latter. The patient died within twenty-four hours of an acute form of sepsis, which he believed resulted from the placenta being left behind.

Mr. MALCOLM said that anyone who had seen these cases must admit their serious nature, for when the abdominal cavity was opened it was often found full of blood. Though some might do well without operation, yet there was great risk in leaving them without interference. It frequently happened that there were second hæmorrhages, and in any one of these the patient might become moribund. He had seen one case in which the sac ruptured into the bowel, and thus led to a condition almost hopeless from a surgical point of view. He referred to the case of a patient who was married on Dec. 28th; towards the end of February she was supposed to miscarry; ten days later, while apparently well and at breakfast, she was seized with severe pain; since then she had had frequent attacks, causing faintness. A large, soft mass filled the pelvis with the uterus in front, and he believed it was an instance of extra-uterine gestation.

Mr. SHEILD had seen three cases where the gestation had been allowed to go on to full term, and all were then removed successfully so far as the mother was concerned. In one case the sac had burst into the bowel, and the whole of the fœtus was extracted from the rectum piecemeal. The second was removed per vaginam from the pouch of Douglas. In the third case a mature fœtus sloughed through the abdominal wall and was removed.

Mr. DORAN, in reply, said that he thought the absence of breast signs in some of his cases was accounted for by the fact that they were very sickly people. He could not deny the possibility of hæmatocele without pregnancy, but the majority of hæmatoceles showed chorionic villi. In all his cases the stage was too early for auscultation to be of value, and, besides, rupture had occurred before he had seen them. He had often found marked pulsation of the ovarian artery in cases of suppurating tube. A false capsule was a dangerous thing, because a surgeon, thinking he was working safely within a capsule, might really be tearing up important structures. He agreed that it was inadvisable to remove the opposite tube and ovary unless necessary because of disease; but if adhesions were present they should be gently separated. He thought that the most valuable sign of extra-uterine gestation was the sudden development of a mass on the right side of the uterus accompanied by pain.

Mr. CRIPPS, in reply, said that the passing of a decidua was not necessarily evidence of extra-uterine gestation, as was apparent from the case already quoted. He had never used the instrument spoken of by Dr. Routh. In one of his cases after removing the fœtus he found a hole in the sac communicating with the rectum. As to the question of operating with living fœtus, it was a mistake to leave it too long, owing to the danger of ulceration into the rectum.

HARVEIAN SOCIETY OF LONDON.

Nauheim and the Schott Treatment of Diseases of the Heart.

A MEETING of this society was held on March 19th, Dr. WILLIAM HILL, Vice-President, being in the chair.

Dr. BOWLES read a paper on Nauheim and the Schott Treatment of Diseases of the Heart, in the course of which he stated that twenty-two years ago Dr. Hermann Weber had transferred to his care at Folkestone a serious case of heart disease with general dropsy, effusion into the pleural and peritoneal cavities, and enlarged heart and liver. The usual treatment had been previously fully carried out with no benefit whatever, but as a last resort a course of sour milk was tried, and all dropsy disappeared except from the abdominal cavity, where effusion persisted in spite of all efforts for its removal, including five tappings. On Dr. Weber's advice the patient was then sent to Nauheim, and in a month he returned perfectly cured. Recently published statements had again drawn Dr. Bowles' attention to Nauheim, and with an open and somewhat sceptical mind he went there to judge for himself whether it were possible that the diminution of the heart's size (when increased pathologically) could be uniformly brought about in a short time and could be always accurately measured in centimetres. He had long ago been convinced that hearts, healthy and diseased, constantly varied in size and, like the iris, the uterus, the arterial system, the abdominal viscera, and all parts supplied with involuntary muscular fibre, were amenable to specific medicinal agents and to physical influences such as heat, cold, light, electricity, and so forth. During the last thirty years he had collected a large number of observations on this subject, especially on localised and changing dilatations of the larger vessels. While at Nauheim last year he had ample material at his disposal, and every possible kindness and assistance from Dr. Schott and Dr. Heineman. These gentlemen never attempted to influence his observations in any way; indeed, they insisted that he should take his own course and judge for himself. He directed his attention strictly to the following points:—1. Was it possible to reduce the size of a dilated, enlarged, and diseased heart in a few minutes—(*a*) by baths, (*b*) by exercises? 2. Was this reduction, if produced, beneficial, and could it be rendered permanent? 3. What was the state of the heart before

and after a course of treatment? It was of the first importance to define well the size of the heart and its relations before and after baths and exercises and before and after a course of treatment; and these points were accordingly subjected to careful experiment. Cases of all these conditions were related and tracings of the actual relations of organs at the time of the respective observations were shown.

CASE 1.—This was a male patient who suffered from chronic myocarditis, with marked dilatation of both ventricles, slight effusion into both pleural cavities, general anasarca, albuminous urine, and a suspicion of incipient tabes. His heart was much enlarged, the apex beating five and a half centimetres to the left of the nipple, and the area of the cardiac dulness was enormous. After twenty minutes' exercises there was a remarkable diminution of the area of cardiac dulness and a shifting of the apex two and a half centimetres nearer to the left nipple and one centimetre lower down, the change being distinctly appreciable to the finger. After a month's treatment the albumin and all signs of dropsy disappeared, the area of cardiac dulness was normal, the patient could walk freely uphill, and said that he felt perfectly well.

CASE 2.—This patient was the subject of marked mitral stenosis with extreme dilatation of the auricles and had a previous history of rheumatism and pleurisy. Before a bath of ten minutes' duration the apex beat eight and a half centimetres to the left of the nipple, but after the bath only five and a half centimetres distant and at a slightly higher level; the general area of dulness was considerably reduced.

CASE 3.—This was a girl fourteen years of age, who had an attack of rheumatism in the preceding winter and suffered from stenosis and insufficiency of the mitral valve. She had been treated at Nauheim for two months by baths alone under medical direction, but without becoming any better; having then been treated with baths and gymnastics under Dr. Schott's system the marked dyspnœa and all præcordial pains disappeared and she considered herself to be perfectly well. Before an exercise of fifteen minutes the apex beat was four and a half centimetres to the left and below the nipple, but after the exercise it was only two and a half centimetres to the left and below.

CASE 4.—This patient, who was the subject of aortic stenosis and slight mitral regurgitation, and was now spending a fifth season at Nauheim, had been much benefited by the treatment. The area of cardiac dulness was normal and the apex beat four centimetres below and just inside the nipple line. After six movements of the exercises the apex was distinctly felt two centimetres nearer the median line. All the cases now reported had been of the most unpromising type and had been carefully treated by the best physicians before going to Nauheim, and all those which Dr. Bowles had observed there made surprising recoveries. Great stress was laid on the point that such immediate and prompt changes are not ordinarily to be expected after a single sitting or a single bath, neither ought they to be sought after, for the medical attendant might then be tempted into using stronger efforts than prudence would sanction; the improvement should come about gradually and in its own proper time. Another point to be remembered was, that the bath treatment gives rise to a marked degree of weakness, which is often very discouraging to the patient and leads him to believe that he has received no benefit. The disappearance of such signs and even symptoms as œdema and dyspnœa and the changes in the heart afford sufficient indications for the physician to judge how the case is progressing.

Mr. EASTES, while acknowledging that the Schott method gave good results generally, asked if it always did so, particularly in the cases where treatment by the older and more generally adopted methods had failed of success.

Dr. BEZLY THORNE said that he could not be surprised at the scepticism with which the merits of the Schott methods are regarded by those who have not themselves enjoyed opportunities of observing their demonstrable results. The names of Broadbent, Grainger Stewart, and Saundby had been mentioned. Those physicians had each one approached the subject in a spirit of reasonable and scientific unbelief, and in the event had become converts and advocates. He himself had been a sceptic of the most advanced order, for he had been in the first instance unable to accept the evidence of his senses, but he had been compelled to yield to the persuasive eloquence of striking results. He called to mind a case which he had reason to believe had been quoted as an instance of a man having been killed by the Schott treatment. The patient had been treated in England for aneurysm, and after having been unable to perform his official duties for a period of something like two years had left his bed to repair to Nauheim. He (the speaker) had seen him for the first time some three weeks later. On that occasion the patient walked a distance of about a mile, part of which was up a steep incline, and after spending more than an hour in conversation walked back again and expressed himself as feeling better than he had done for years. Shortly afterwards he contracted a severe chill from sitting in the open air in the course of a cold evening which had succeeded to a singularly hot and sultry day. The result was pleuro-pneumonia and death, and a post-mortem examination made by the pathologist attached to the University of Giessen revealed the existence of aneurysm of the heart and calcification of the coronary arteries. Such cases of failure could not be regarded as evidence against the system.

Dr. WETHERED said that about two years ago he paid a visit to Nauheim and was much astonished by the results of the special treatment for chronic cardiac disease which he saw there. He felt deeply grateful to Dr. Schott for the trouble he had taken in affording him opportunities for observing patients under treatment. He (Dr. Wethered) fully corroborated the remarkable statement made by Dr. Bezly Thorne that all forms of chronic heart disease derived benefit from the baths and exercises. He had seen cases at Nauheim which in England would have been regarded as hopeless, and in which digitalis and all ordinary treatment had been tried in vain, yet under the Nauheim treatment the improvement was marvellous, but as soon as the treatment was discontinued these patients began to relapse. Yet some of the worst cases during the months they were at Nauheim seemed to reap sufficient benefit to carry them over the winter months, until they could return to Nauheim and receive a new lease of life. He considered that in a great measure the success at Nauheim depended upon the strict *régime* which the patients were compelled to follow. If patients in England would consent to submit themselves to the same rigid rules of life he saw no reason why the treatment should not be adopted in this country, more especially with regard to the exercises, but they were useless unless properly carried out for some time. He thought the cases which were most suitable were those of dilated heart without valvular mischief and neurotic cases, although many cases of valvular disease obtained much benefit. Cases of Graves's disease were not so satisfactory.

Dr. CAGNEY said that both Dr. Bowles and Dr. Bezly Thorne, while vouching for very remarkable cures in cases of enlarged heart with the usual consequences—œdema, albuminuria, venous congestion of organs, &c.—had omitted to deal with the question of the original lesion of which cardiac enlargement was a result. They had been told that some patients were cured in one visit or course of treatment. Were such patients the subject of valvular lesion, and, if so, what became of the lesion?

Dr. C. W. CHAPMAN doubted the possibility of so accurately defining the variations of cardiac dulness as the drawings illustrative of the Schott treatment would appear to indicate. He pointed out the fallacies in auscultatory percussion, and stated that the note varied with the distance between the chest piece and the part struck, irrespective of what was beneath, and that firm pressure of the chest piece sometimes caused a difference of a semitone.

Dr. LESLIE THORNE THORNE, in answer to the question as to the possibility of the Schott treatment being successfully carried out in England, said that he had treated a number of cases of heart disease by this method both at Llangammarch Wells in Wales and also in London, and out of thirty cases so treated twenty-nine had given excellent results, the unsuccessful case being one in which calcareous degeneration of the walls of the vessels played a prominent part in the circulatory trouble. He had made careful examinations as to the effect of the baths and exercises upon the area of cardiac dulness and had obtained results similar to those of Dr. Bowles.

Dr. ALEXANDER MORISON criticised the degree of cardiac shrinkage related by many advocates of the method. The benefits arising from the system he attributed to the exaggeration of the peripheral and pulmonary aids to circulation as well as to direct stimulation of the heart.

Dr. JOHN BROADBENT agreed that one of the important contributing agents to the beneficial results obtained in the treatment of heart disease at Nauheim was the regular

routine life led there with freedom from worry and excitement of all kinds. While admitting that the treatment by baths and exercises was of great service in suitable cases, he wished to protest against the idea that it was advisable or beneficial in all varieties of morbus cordis, or that equally good results could not be obtained by other methods in many cases. He instanced the rapid recoveries that take place every day in hospital as a result of rest and suitable treatment by mercurial purgatives and digitalis in cases of valvular disease where compensation has broken down in consequence of overwork or imprudence on the part of the patient, or in consequence of an intercurrent attack of bronchitis. He had not found the Schott treatment serviceable in advanced cases of valvular disease with complete failure of compensation where drugs and rest had not alleviated the symptoms, neither did he consider it safe or advisable in cases of aortic regurgitation of any severity, as he had twice known of syncopal attacks taking place while the patient was in the bath. He thought that its employment was indicated in cases of mitral disease, more especially mitral stenosis, when compensation had not broken down, but was maintained with difficulty; in such cases digitalis, though it might increase for a time the contractile power of the right ventricle, was not beneficial, as the blood could not be forced at more than a certain pace through the narrowed mitral orifice, and this useless expenditure of force would wear out the right ventricle prematurely. One such case he had known to derive great benefit from a visit to Nauheim. He thought that the Schott treatment was often of great service in cases of tachycardia, and loss of tone of the heart after influenza or some depressing illness, but he deprecated its employment in cases of temporary cardiac dilatation in young adults the result of over-strain from football or rowing, as they would get well without it on abstaining from violent exertion; in fact, in such cases gentle walking exercise had the effect of bringing in the apex of the heart in the same way as the Schott movements.

Dr. H. NEWTON HEINEMAN (of New York) said that he had seen numerous patients who had returned to Nauheim every summer for periods of from three to ten years, and of these patients not a few had been on the point of giving up their ordinary occupations, but were enabled to continue them for many years simply as the result of this treatment. While in Berlin this winter he was permitted, by the courtesy of Geheimrath von Leyden, to apply the exercises daily for a period of nearly three months to a number of cases, and the results exceeded his expectations. The treatment employed by the late August Schott was published and elaborated some time before that of Oertel.

NORTH-WEST LONDON CLINICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on March 18th, Dr. CAGNEY being in the chair.

Mr. C. H. CLAYTON showed an athletic and muscular young man in whom there was marked Wasting of the Scapular and Deltoid Muscles.

Dr. JOHN SHAW showed a Slough which represented the mucous lining of a uterus affected with cancer which was too extensive to admit of operation. The slough had separated painlessly after the application of caustic zinc chloride.

Mr. DURHAM showed a Piece of Articular Cartilage with a thin layer of bone beneath it. The fragment had been removed from the knee of a young man as a loose body six weeks after a fall. It had probably been chipped off the patella.—Mr. DURHAM also showed a boy in whom the Triceps had been completely and the Ulna partially Divided by a Saw. The power of the triceps had been perfectly recovered and there was only slight impairment of the function of the ulnar nerve.

Mr. JACKSON CLARKE showed a case of Paget's Disease of the Nipple. The patient was a woman aged forty-three years. The disease was first noticed as a "scurfy patch" at the site of the nipple seven years previously. The affected area was now as large as the palm of the hand, had a sharp sinuous border, and a typical bright bluish-red colour; there were shallow excoriations here and there. No induration could be detected in the breast or axillary glands. Mr. Clarke proposed to remove the breast.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Specimens and Photographs.—Nasal Obstruction.—The Management of the Diet in Enteric Fever.

A MEETING of this society was held on March 6th, Mr. MAYO ROBSON being in the chair.

Mr. CROFT showed a Solid Tumour of the Ovary, probably Sarcoma.

Dr. TREVELYAN showed (*a*) a Stomach with Coffee-ground Contents and no obvious Lesion of the Mucous Membrane; (*b*) a Vermiform Appendix with a concretion *in situ*; and (*c*) Extensive Carcinoma of the Larynx.

Dr. JOHNSTONE CAMPBELL showed Photographs taken by Roentgen's Method.

Dr. WARDROP GRIFFITH showed (*a*) a Specimen showing considerable Cardiac Hypertrophy without Arterial Change in a young lad who died from chronic parenchymatous nephritis; and (*b*) a specimen showing Great Thickening of the Bladder with real Muscular Hypertrophy and Marked Hydro-nephrosis without any other signs of mechanical obstruction to the exit of urine.

Dr. ADOLPH BRONNER read a paper on the Causes and Sequelæ of Nasal Obstruction.

Dr. BARRS read a paper on the Management of the Diet in Enteric Fever, in which he strongly advocated a relaxation of the strict dietetic rules usually followed in the direction of an earlier administration of solid food, especially meat, not only in convalescence, but in the acute stages of the disorder, the patient's appetite and general condition being taken as the guide to practice and not the temperature chart, as at present. He did not advocate the use of solid food at all stages and in all conditions of enteric fever, but was strongly of opinion that great harm was frequently done, and convalescence unduly lengthened, by the prolonged periods through which patients were confined to an unnatural (i.e., entirely fluid) diet according to the present rules of practice. Of thirty-one cases of enteric fever treated on this principle during the last three years in the Leeds Infirmary three only had died, and in each of these three cases it had been found absolutely impossible for the patient to take solid food. He deprecated the great tendency to treat the intestinal lesions at the expense of the individual.—Dr. JOHNSTONE CAMPBELL maintained that Dr. Barrs's treatment was irrational, though possibly not bad in actual practice. Considering the ulceration, food should be given which is largely absorbed before coming to the ulcerated part, and such a diet is milk. Milk also causes diuresis, an important point in view of the destructive metabolism that goes on in enteric fever. Fruit contains practically no nutriment and much waste, and was, therefore, the worst thing that could be given. During the convalescent stage he advocated meat rather than rice puddings as having less waste material for evacuation by the bowels.—Dr. EDDISON thought that if the tongue was clean and the abdomen flaccid the exact kind of diet was not very important. Defending milk diet, he denied the assumption that milk diet was starvation. The digestion is weak in enteric fever, and if upset by extra diet may lead to tympanites, which he felt sure tended to favour perforation.—Mr. PEARSON had treated 1000 or 1100 cases of enteric fever during the last five years, using the ordinary routine treatment, and while agreeing with Dr. Barrs that a too rigid diet during early convalescence was bad, and that a more generous diet often was followed by a normal temperature record, he differed from him in his views as applicable during the acute stages, and especially he objected to fruit as an article of diet.—Dr. CHURTON, basing his remarks on 74 analysed cases, said there had been 6 deaths—3 from pneumonia, 2 from hæmorrhage, and 1 from perforation. Milk he preferred as a diet, for, even if undigested, it was a less favourable medium for the growth of organisms than other forms of liquid nourishment. A mixed diet tended to cause diarrhœa.—Dr. BARRS, in reply, said that he quite anticipated that his suggestions would meet with strenuous opposition, seeing that there was little, if any, scientific basis for the rules laid down for the dietetic treatment of enteric fever beyond the supposed danger of solid food producing perforation of the gut. It had been suggested that solid food, and fruit especially by its bulky residue, would cause irritation of the intestinal lesions, but in the cases treated upon the plan suggested there had been no increase of diarrhœa or other evidence of irritation. Dr.

Barrs claimed that his cases clearly proved that the strict exclusion of solid food from the dietary of enteric fever was not necessary to its successful treatment, and therefore could not be free from harm in all instances.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Exhibition of Specimens.

A MEETING of this society was held on March 11th, Dr. H. R. HUTTON, President, being in the chair.

Dr. MILLIGAN showed microscopic preparations of two cases of Sarcoma of the Middle-ear. In the first case the patient, a female aged sixty-three, had suffered for many years from suppurative middle-ear disease. Three years ago the right external meatus became blocked by a fleshy growth. Attacks of spontaneous hæmorrhage were frequent and severe. Upon examination a fleshy growth of a very vascular character was found occluding the lumen of the meatus. Marked facial paralysis and atrophy of the facial muscles upon the same side existed. Deep-seated and extensive caries was easily demonstrated to be present. No enlarged glands could be found. The patient stated that recently she had lost weight. A portion of the growth was removed for microscopic examination and proved to be a very vascular angio-sarcoma. In the second case the patient, a girl aged eighteen, had suffered from left-sided suppurative middle-ear disease for seventeen years dating from an attack of scarlet fever. Latterly she had lost weight, and had had several attacks of spontaneous hæmorrhage from the ear. Upon examination the meatus was found to be quite blocked by a fleshy and vascular growth surrounded by very fœtid pus. The surrounding tissues were infiltrated. Examination of a portion of the growth showed it to be myxo-sarcomatous in structure. — Dr. MILLIGAN also showed the Brain from the case of a patient who had died from Basilar Suppurative Meningitis secondary to an Acute Temporo-Sphenoidal Abscess. The patient, a man aged forty-eight, had suffered for three months from suppurative middle ear disease upon the left side. The cause was unknown and the definite statement was made that no previous ear mischief had at any time existed. When first seen the patient complained of great frontal pain and inability to sleep although he felt drowsy. The pulse was 62 and the temperature 98·6° F. The skin was dry, the tongue furred, and the bowels obstinately constipated. The optic disc upon the same (left) side was congested and its margins fluffy. Left-sided ptosis and facial paralysis existed. The left membrana tympani was perforated and inflamed. Both motor and sensory aphasia existed to a marked degree. Under chloroform the posterior portion of the temporo-sphenoidal convolutions were explored, a large abscess found, and a drainage-tube was inserted. For several weeks the patient made good progress; his mental condition, which had previously been very dull, cleared up, and he was able to move about the wards. Unfortunately, a hernia cerebri formed. Suppurative meningitis ensued and the patient died nine weeks after the operation. No secondary bone affection was found in the parietes of the middle ear or in the mastoid cells, so that the pathogenic organisms must have been directly conveyed from the middle ear to the brain by means of the venous or lymphatic radicles in the immediate neighbourhood.

Dr. KELYNACK showed preparations of a case of so-called Emphysema of the Liver. The macroscopical and microscopical characters were described and references made to several examples recorded by other pathologists. The opinion was expressed that it was almost, if not entirely, due to putrefactive changes.—Dr. KELYNACK also showed a series of preparations from a case of Proliferative Adenocystoma of the Kidney and Liver. The subject of the growths was a woman aged thirty-three. Progressive enlargement of the left kidney and liver, with marked ascites and general indications of malignant disease, were the leading clinical features of the case. The pathology of the tumour was discussed and the points in which it differed from many of the renal adenomata already recorded dwelt upon. The case is to be recorded in detail.

Mr. PETER PIKE, M.R.C.V.S., showed the Skull of a Horse which had been affected with Alveolar Sarcoma. The swelling of the upper jaw had come on suddenly and increased rapidly in size for sixteen days, when an operation was performed and the tumour removed. This was a hyaline growth, which, on microscopical examination, was found to consist of minute round cells in the centre and larger spherical cells at the periphery. The growth recurred and the animal was destroyed four months after the onset of the disease; no secondary deposits in other organs were found. In these equine cases of alveolar sarcomata the alveolus only is affected, the teeth remaining free.—Mr. PIKE also showed a specimen of Bovine Alveolar Sarcoma taken from a three-year-old bullock. A swelling arose in the submaxillary fossa, the second and third molar teeth being affected. The tumour was removed, but recurred, the teeth being affected; microscopically it showed the characters of an osteo-dentoma.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases.

A MEETING of this society was held on March 7th, Dr. A. BRONNER, President, being in the chair.

Dr. MAJOR showed the following cases: 1. Sporadic Cretinism greatly benefited by Thyroid Feeding. The patient was a girl aged six years who when first seen presented a typical picture of a cretin. The improvement was both mental and physical, the child being able to walk and to speak and was attending school. 2 Splenic Leukæmia with Microscopic Demonstration of Blood. The patient was a woman aged thirty-eight years whose spleen extended down to the iliac fossa. 3. A man aged twenty-three years who for many years had Disease of the Left Ear. For two days before admission he had severe headache and giddiness. There were also Jacksonian convulsions affecting the right arm, face, and leg. He appeared to be dying. Mr. Appleyard trephined over the left temporo-sphenoidal region and explored the left hemisphere of the brain with a needle with negative result. The patient made an excellent recovery and was now able to work.—Dr. CRAWFORD, Dr. H. BRONNER, and the PRESIDENT discussed the cases and Dr. MAJOR replied.

Dr. CAMPBELL showed the following cases: (1) Peripheral Neuritis in a man, alcoholic in origin; (2) Congenital Pulmonary Stenosis in a child; (3) Interstitial Pneumonia in a Child; (4) Pericarditis; and (5) Progressive Muscular Atrophy.—The cases were discussed by Dr. MAJOR, Dr. RABAGLIATI, and Dr. H. BRONNER.

The PRESIDENT showed (1) a case of Extensive Lupus of the Face treated with tuberculin; (2) a girl aged twelve years who had recovered her sight under treatment with mercurial inunction and iodide of potassium internally; and (3) cases of Congenital Specific Choroido-retinitis.—Dr. RABAGLIATI and Dr. GREENBURY spoke and the PRESIDENT replied.

Dr. S. LODGE demonstrated the use of Kirstein's Autoscope and also showed a man aged fifty-seven years on whom he had operated in 1891, removing a Cataract from the right eye by Macnamara's method. The patient had done well, and at the present time could read $\frac{J. No. 1}{33 cm.}$ with + 8·0 D. sph., and with + 12·0 D. could read J. No. 1.

Mr. WILMOT showed a patient with a Congenital Malformation of the Forearm, probably an intra-uterine amputation below the elbow-joint.—Dr. CRAWFORD and Dr. MANKNELL spoke on the case.

Dr. H. BRONNER showed a case of Ophthalmoplegia Interna.

Dr. CRAWFORD showed a man with an Aneurysmal Varix of the Right Thumb.

QUEEN'S HOSPITAL, BIRMINGHAM.—The annual meeting of the Queen's Hospital, Birmingham, was held at the Council House on March 19th. The Mayor presided, and in the course of his address called special attention to the fact that the subscriptions last year were £1100 less than they were twenty years ago. He feared that in the mind of the public the Queen's Hospital was to some extent overshadowed by the General Hospital. Sir James Sawyer said that although the general subscriptions had fallen off, yet the Hospital Saturday contribution of £2025 last year showed an increase. During last year 2000 patients were admitted and 28,000 out-patients received advice and treatment.

Reviews and Notices of Books.

Lectures on Pharmacology (Vol. I.). By Dr. C. BINZ. Translated from the Second German Edition by ARTHUR C. LATHAM, M.A., M.B. Oxon., M.A. Cantab. London: The New Sydenham Society. 1895.

THIS translation of the first volume on pharmacology will be welcomed by English readers. The book is practically a reproduction of a course of lectures by Dr. Binz, and aims at presenting the knowledge of pharmacology in a practical and interesting form. The subject is naturally a little vague in its boundaries, dipping, as it does, into so many sciences, so that it is without doubt a great boon to have its principles put before us in such a way that they can be easily assimilated. The book is well illustrated, and it cannot fail to prove useful both to students and to those engaged in actual practice.

The Chemist's Compendium. Compiled by C. J. S. THOMPSON. London and New York: Whittaker and Co. 1896. Price 2*s.* 6*d.*

THIS little book is addressed to pharmacists, chemists, and students, and contains a veritable mine of useful information, much of which is of great importance to the medical profession. It is impossible to enumerate here all the subjects upon which it touches, but some idea of the ground it covers may be imagined when we say that it deals with a synopsis of the formulæ of the British Pharmacopœia, metrical weights and measures, stains and media for microscopical work, milk analysis, sale of poisons with schedule, and organic materia medica, giving British Pharmacopœial and botanical names, natural orders, habitats, and active principles. These are only a few of the subjects dealt with; and, got up as it is in a compact form, it will be a most valuable reference-book for those whose work brings them in contact with pharmaceutical and chemical knowledge.

Our Growing Children, with Special Reference to the Physical Education of the Weakly. By GERARD SMITH, M.R.C.S. London: John Bale and Sons. 1896. Price 2*s.* 6*d.*

THE subject of this little book is one of almost universal interest, for by attention to a few simple rules those who have the care of children can do much to promote the bodily well-being and happiness of the rising generation, just as, on the other hand, from thoughtlessness or want of knowledge the most affectionate parents may inadvertently jeopardise the future career of their offspring. Mr. Smith deals principally with the causes, prevention, and correction of stooping attitudes, curvature of the spine, and flat foot, a course of systematic gymnastics without violent exertion being recommended and fully described. He also touches incidentally on the care of the eyesight, the form of school seats and desks, and the position assumed while writing. The book contains much information, useful both for school managers and for parents of delicate children. The author is a cyclist, and has devoted some pages to the subjects of posture in cycling and the best form of seat.

JOURNALS AND REVIEWS.

The Indian Medico-Chirurgical Review. Edited by N. H. CHOKSY. Bombay: N. K. Rao and Co. London: Baillière, Tindall, and Cox. January, 1896.—We may briefly allude to the January number of this journal which seems to be a creditably conducted review containing many contributions from the native practitioners of India and others. There are original articles on the treatment of placenta prævia in hospital and private practice; on turbinotomy and its effects on affections of the ear; on rheumatism and malaria; and various reports and articles on the Eleventh Indian National Congress; the sanitary administration, the state of vaccination, and the civil dispensaries of Burma during 1894–95; together with an Indian Annus Medicus, reviews and notices of books, and a *résumé* of the progress of medical science. The figures in the papers devoted to Burma and vital statistics, the Indian Annus Medicus, and the extracts from current medical literature, arranged in different sections and descriptive of the progress of medical science, give much useful and reliable information.

Vectis, a Monthly Journal of Literary, Local, and General Interest. Edited and conducted by G. H. R. D. Shanklin, Isle of Wight: Silsbury Bros.—Under the insular title of *Vectis* has been issued a monthly journal of "literary, local, and general interest" for the Isle of Wight. If we mistake not, the idea is not quite original, and we should be sorry to predict an unhappy termination to the present plucky venture; but we cannot help thinking that there is not enough "go" in the Island for its people alone to support such a journal, even although it would be decidedly to their own advantage to do so liberally. Probably its only chance of financial success would be in its ability to compete successfully with the best London sixpenny magazines, and we shall look forward to a nearer attainment of this in its quarterly form, the first number of which will be ready in May. One feature of the journal is good—namely, the "Blank Cartridge" of the editor; and there is quite local colouring enough in this to suffice, with such an occasional article as might be written on, say, the National Hospital at Ventnor, to ensure *Vectis* living up to its name. Under this heading the editor writes pluckily and pithily, and his fearless remarks upon medical, sanitary, and general matters might be turned to much local benefit. He also has a kindly and practical word to say for the humane treatment of horses in hilly districts like the Isle of Wight. But, on the other hand, he hits hard at snobbery, cant, and unkindness. In short, his blank cartridge is charged with very penetrative powder.

State Hospitals Bulletin. Published by authority of the State Commission in Lunacy. Utica, N.Y.: State Hospital Print. 1896.—This new journal is designated as a quarterly report of clinical and pathological work in the New York State Hospitals (for the insane) and their pathological institute. In their opening announcement the editors expressly state that the *Bulletin* is not intended to compete with any journalistic work in present existence. They hope that it will act as coadjutor to journal workers in presenting facts that may be used by them, and believe that it will be a means of preserving and disseminating useful and interesting knowledge that would otherwise slumber undisturbed in case-books and clinical records. The aim of the work is excellent, and the example thus set might be profitably copied in this country; for instance, by the authorities of the London County Council Asylums. The first number contains a series of original and important articles which cover a large extent of ground, and should the present standard of excellence be kept up, the new departure ought to prove a valuable addition to the records of psychological literature.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN.—The seventy-ninth annual meeting of the Royal Hospital for Children and Women, Waterloo-road, was held at the hospital on March 20th, under the presidency of the Lord Mayor, who was accompanied by the sheriffs. The report showed that the in-patients had fallen from 591 in 1894 to 486 in 1895, but the out-patients in 1895 showed an increase of 220. The financial necessities of the hospital had compelled the sale of £500 Consols to defray ordinary expenditure, and new annual subscriptions were urgently required to meet liabilities amounting to nearly £600.

Analytical Records
FROM
THE LANCET LABORATORY.

APENTA.

(THE APOLLINARIS CO., LIMITED, 4, STRATFORD-PLACE, OXFORD-STREET, W.)

APENTA is a well-known and much-esteemed purgative water derived from the Uj Hunyadi Springs, situated on the slopes outside Buda-pest. Its composition in regard to its saline and active constituents, as far as we have examined samples obtained at different times and different places, is constant—a point of some importance, since the practitioner is thus enabled to prescribe definite quantities for definite results, and patients to rely upon a uniformity of medicinal action. The specific gravity of four samples taken at random at different times ranged between 1·039 and 1·041, which represents but a slight difference in the amount of dissolved saline constituents. The mean composition in grammes per litre was found to be as follows: magnesium sulphate, 23·40; sodium sulphate, 16·32; sodium chloride, 1·81; calcium carbonate, 0·90; and calcium sulphate, a trace. There was a good indication of lithium. It will be seen that the magnesium sulphate is decidedly in excess of the sodium sulphate. The taste of the water is bitter, but is less disagreeable than it might be were the magnesium salt not distinctly in excess of the sodium salt. The magnesium salt is less nauseating, and as a purgative is of a generally milder character and less rapid in its action than sulphate of soda. Its medicinal effect is favourably modified doubtless by the fact of its being a natural water. The observation has frequently been made that artificially-made waters exhibiting approximately the same saline composition are not so beneficial as those derived from natural sources. This would appear to be true of purgative as well as chalybeate and alkaline carbonated waters.

(1) OLD GRANS TODDY (SCOTCH WHISKY); AND (2) SLOE GIN.

(CHARLES WRIGHT AND SON, WIRKSWORTH, AND 33, GREAT TOWER-STREET, E.C.)

On analysis the whisky gave the following results; alcohol, by weight 39·30 per cent., by volume 46·59 per cent., equal to proof spirit 81·64 per cent.; extractives, 0·12 per cent., yielding 0·01 per cent. mineral matter; and acidity reckoned as acetic acid, 0·021 per cent. These are satisfactory results to which should be added that it possesses a mild and mellow taste characteristic of a matured spirit and therefore free from crude and injurious products of distillation. It is evidently a careful blend of a pure and palatable character. Sloe gin is a comparatively new introduction not entirely to be deprecated since it is much less powerful than ordinary liqueurs, for which it serves as a pleasant substitute. It is of rich port-wine colour and possesses a peculiar, slightly astringent, but agreeable flavour, derived from the fruit of the blackthorn. Its alcoholic strength, as will be seen below, is much less than that of ordinary gin. On analysis the following results were obtained: Alcohol, by weight 22·15 per cent., by volume 27·04 per cent., equal to proof spirit 47·39 per cent.; extractives and sugar, 18·13 per cent.; ash, giving distinct evidence of soluble phosphates derived probably from the fruit, 0·35 per cent. We could trace no injurious colouring matters.

EXTRACT OF MALT.

(THE SCOTTISH PRESERVES COMPANY, LIMITED, GREENOCK.)

The care with which this extract is prepared is evident from its fine malty flavour and its powerful digestive action upon starch. It is contained in tins provided with a lever lid of wide dimensions, so that the extract may be easily taken out with a spoon. This is a distinct advantage and convenience, especially in the case of sticky substances. Many have experienced how tedious and clumsy an operation it is to obtain a definite quantity of viscous malt extract out of a bottle having a comparatively small opening. The extract before us is of fine quality, possessing both directly and indirectly nutritive properties of recognised value.

COD-LIVER OIL (COLD DRAWN).

(E. B. MACDOUGAL, ST. JOHN'S, NEWFOUNDLAND.)

The feature of this preparation consists in its having been expressed from the liver in the cold. It is a clear and brilliant oil of a pale straw colour and its specific gravity was found to be 0·929. To test-paper it is neither acid nor alkaline. Whatever may be the particular method of its preparation it is certainly as free from disagreeable flavour as cod-liver oil pure and simple can well be. It is well borne, without the unpleasant eructations which follow the ingestion of oils of a less degree of refinement.

CREAM CARAMELS.

(CLARKE, NICKOLLS, AND COOMBS, HACKNEY WICK WORKS, N.E.)

These confections are stated to be prepared with cream, and our analysis gives no evidence to the contrary. They contain an excellent proportion of butter fat, and in the mineral residue obtained on incineration phosphates derived from milk were found. These caramels are evidently pure confections and have a pleasant toffee-like flavour.

FOOD DELICACIES: (1) PURÉE OF CHICKEN TRUFFLED; AND (2) PURÉE OF TOMATO AND SARDINE.

(J. MARQUIS, LATE RUFFIN AND CO., LIMITED, 74, TOTTENHAM COURT-ROAD.)

We need say nothing of the well-known appetising character of food preparations of the above order. It remains only to record that the above preparations, which are of a high-class kind, were found to be entirely free from objectionable preservatives, while all risk of metallic contamination is obviated by the preparation being contained in glass jars, closed and sealed by atmospheric pressure. This is a method of packing food which we strongly commend.

IRISH WHISKY.

(KINAHAN AND CO., GUILDFORD-STREET, YORK-ROAD, LAMBETH, S.E.)

This is a spirit of exceptional softness and mellowness of character, due doubtless to thorough ripening by storage. It is, therefore, peculiarly well adapted for medicinal purposes. It possesses the delicate "peaty" aroma and flavour which distinguish Irish whisky, and is free from those bodies found in the products of distillation which are said to cause unpleasant physiological effects. On analysis the following results were obtained: alcohol, by weight 40·80 per cent. by volume 48·21 per cent., equal to proof spirit 84·49 per cent.; extractives, 0·09 per cent.; mineral matter, *nil*; acidity reckoned as acetic acid, 0·006. It will be seen that it contains practically no extractives and that its acidity is almost *nil*.

SANITAS MOTH PAPER.

(THE SANITAS CO., LTD., BETHNAL-GREEN, E.)

There are not a few who would welcome an effective means of getting rid of the moth pest. The Sanitas Moth Paper is designed with this object in view. It consists of a sheet of paper glistening with crystals of probably a mixture of camphor and naphthalene. The former serves to mask to some extent the disagreeable smell of the latter. It is no doubt an effective device.

NUTROA FOOD.

(NUTROA, LIMITED, 54, CHISWELL-STREET, E.C.)

Nutroa food appears to consist of malted and cooked wheaten flour enriched with a preparation called "nutroa,"

which is a substance rich in proteids, fat, and mineral matter derived in a special way, as its name would imply, from some kind of nut. "Nutrea" is also used for enriching flour for the preparation of bread. Our own opinion is that flour of good quality needs no such addition. But since milling has become a fine art we fear that wheaten flour is often behind the standard of quality in regard especially to proteids and phosphatic constituents. The addition of "nutrea" in such a case would compensate, and in sufficient proportion more than compensate, this poverty in these most important food elements. For the purposes of a special food as that before us such an addition is also valuable, assuming, of course, that the substances introduced are available for nutrition, and it is only the evidence of experience that can decide this and not a mere chemical analysis. Nutrea food, we find, exhibits the following composition: proteids, 16·00 per cent.; fat, 13·40 per cent.; mineral matter, 0·94 per cent.; carbohydrates, 60·32 per cent.; and moisture, 9·34 per cent. The fat is in an emulsified condition, and the effect of malting the food appears to protect the fat from becoming rancid, besides partially converting the carbohydrates, which are thus made more soluble. The food, therefore, presents not a single deficiency in regard to the essential factors of a complete diet, proteid, carbohydrate, fat, and mineral matters being present in generous and well-suited proportion.

ANÆSTHETIC TABLOIDS.

(BURROUGHS, WELLCOME, & Co., SNOW-HILL BUILDINGS, E.C.)

The production of local anæsthesia by the infiltration method has recently been employed by Dr. Schleich of Berlin with very satisfactory results.[1] His procedure is to dissolve a small quantity of cocaine hydrochlorate in a weak solution of common salt, by which it is found that the discomfort of an ordinary hypodermic injection was considerably reduced while the anæsthesia was less transitory. The addition of morphia hydrochlorate is an advantage in sufficiently maintaining the insensibility to pain to allow of prolonged surgical operation. The infiltration method consists briefly in injecting within, not under, the skin so that a wheal is produced somewhat like a mosquito bite and about the size of a halfpenny. The first area having been anæsthetised, a number of new circles are added overlapping each other so as to include an area within which the operation is to be conducted. The anæsthetic effect lasts, it is stated, some twenty minutes, fresh infiltrations prolonging the period for hours. The advantage of having the anæsthetic mixture ready to hand in tabloid form is obvious. In the first place, decomposition cannot set in in the tabloid form, and accuracy of measurement of the quantities required is ensured. With this view tabloids have been prepared representing the following useful formulæ:—No. 1, "strong"—cocaine hydrochlorate, 1-5th grain; morphia hydrochlorate, 1-40th grain; and sodium chloride, 1-5th grain. One tabloid dissolved in 100 minims of water yields the "strong" solution. No. 2, "normal"—cocaine hydrochlorate, 1-10th grain; morphia hydrochlorate, 1-40th grain; and sodium chloride, 1-5th grain. One tabloid dissolved in 100 minims of water yields the "normal" solution. No. 3, "weak"—cocaine hydrochlorate, 1-100 grain; morphia hydrochlorate, 1-40th grain; and sodium chloride, 1-5th grain. One tabloid dissolved in 100 minims of water yields the "weak" solution. In all three formulæ the proportions of morphia hydrochlorate and sodium chloride are the same, the proportion of cocaine hydrochlorate only varying. The normal strength is that usually employed, and it is adapted to nearly every variety of minor surgical operations, the weak being employed for infiltration into deep tissues after superficial anæsthesia has been produced by No. 2. No. 1 is used for very sensitive areas only. Each strength is supplied in non-actinic glass tubes containing twelve tabloids in each.

[1] THE LANCET, Feb. 29th, p. 565.

IODOFORMIN.

(SPIES BROS. Co., 112, FENCHURCH-STREET, E.C.)

Iodoformin is described as a chemical combination of iodoform, and like it its antiseptic action probably depends upon the readiness with which it parts with its iodine. Though possessing an unmistakable smell of iodoform it is much less powerful and persistent. It is a fine, very light yellow powder which is not very soluble in cold, but freely in hot, alcohol. By the action of secretions in wounds it is said to liberate iodoform, but that this separation stops as the secretion ceases, so that the iodoform is not in objectionable excess. It is said also that, unlike iodoform, it dries up the secretions without forming crusts. Iodoformin mixes with glycerine, forming an emulsion, and it can be used favourably in the form of ointment. Its chief advantage appears to be that, though it is not exactly iodoform, and therefore free in some respects from some of its objections, yet it readily yields that body when in contact with secretions of wounds. The same advantages would appearto be gained by the use of iodoformin gauze, a specimen of which we have also recently received.

ANTIKAMNIA.

(J. M. RICHARDS, 48, HOLBORN-VIADUCT, E.C.)

Antikamnia is well spoken of as an analgesic and antipyretic in the treatment of neuralgia, rheumatism, &c. As may be imagined, it is one more addition to the already long list of coal-tar derivatives of the benzene series, into which, however, certain amine groups have been introduced. It is a white powder of a bitter taste and alkaline reaction. It is not disagreeable to take and may be had either in powder or tablet form, the latter being made in five-grain size. It is described as not a preventive of, but rather as affording relief to, existent pain. By the presence in it of the amine group it appears to exert a stimulating rather than a depressing action on the nerve centres and the system generally. If this be so it possesses advantages over other crystalline coal-tar products.

TAKA DIASTASE.

(PARKE, DAVIS, AND Co., 451, OXFORD-STREET, AND 21, NORTH AUDLEY-STREET, GROSVENOR-SQUARE, W.)

Taka Diastase is, as we have found by experiment, an exceedingly active form of diastase obtained by cultivation of a fungus of the species Eurotium Oryzæ, a mycelial of the Aspergillus family. The elaboration of the process, by which also a powerful ferment (Taka Moto) is simultaneously obtained, is due to a Japanese chemist, Mr. Jokichi Takamine, whose investigations were fully described in THE LANCET of May 25th, 1895. The purified diastasic product, of which we have recently received samples, consists of a somewhat brittle powder of a light-brown colour; it is practically free from taste, but it imparts a peculiar sensation when placed on the tongue indicative of high amylolytic properties. It will readily convert over a hundred times its weight of starch. In reducing carbohydrates to a soluble and probably more assimilable condition in food it should prove of great service.

THE SOUTHAMPTON SEWAGE.—The county council of Southampton have, on the recommendation of the medical officer and the health committee, appointed a committee to consider the substitution of a single for the present duplicate outfalls on the western shore. Mr. Harris reported a great nuisance from the sewage at Shirley falling on the mud and on the seaweed—the accumulation of the latter itself a point to be remedied. He pointed out that many advantages would accrue could a single outfall for the whole of the sewers be obtained

THE LANCET.

LONDON: SATURDAY, MARCH 28, 1896.

NEITHER the profession nor its journalists can feel very proud of the appearance of the profession in the recent case of Kingsbury *v.* Hart, or satisfied with the position in which it leaves the question of medical advertising—a professional offence which has many forms, some of them so subtle as to be more objectionable than the coarser ones, which generally come before the medical bodies, and are still more frequently referred to the medical press. The recent case is of prime importance to the medical press. For one case that is referred to the examining bodies a hundred are referred to the medical journals. The ethical function of the medical press is, indeed, one of the most important it has to exercise, as was suggested in the recent trial, and any verdict which tended seriously to hamper or to disparage it would be a misfortune for the whole medical profession. It is not always a pleasant function. For our own part we have often to blame and it is always painful to have to do so. And sometimes we do so hoping almost against hope that any good can arise. But on the whole it is our experience that much good is done by any reasonable and proportionate criticism. Many errors of behaviour are unintentional, and when attention is directed to them are readily abandoned. Where they are brought to notice early and discussed in a spirit of moderation the result is often satisfactory. We may then well feel some concern at any seeming discouragement to the free expression of ethical opinion by the medical press arising out of the case lately tried by an eminent judge and a Manchester jury, the *Times* report of which is to be found in THE LANCET of March 7th. In this case a medical contemporary has been ordered to pay damages of £150 for severe words of censure on a prominent member of the profession in private practice at Blackpool for allowing his name to be on a brass plate on the gate of a hydropathic establishment—otherwise called a hotel—and for having his name advertised as the physician of the establishment in its prospectus, in press advertisements, and the like. No good object would be served by our discussing in detail the merits of this case. We are, however, greatly concerned with its bearing on the general question of medical ethics and the forces of the profession for their vindication. Here was an ethical question at issue in an Assize Court in which a leading local practitioner was a plaintiff and the editor of the journal of the British Medical Association the defendant. The editor was supported by leading members of the association, by the treasurer of the Royal College of Physicians of London, and by others. No immediate neighbour of the plaintiff was called, but Manchester physicians, including the secretary of the Manchester Medico-Ethical Society, testified that they did not see that the plaintiff had broken any well understood rule of medical practice or of the Manchester Medico-Ethical Society.

We think it a misfortune, not to say a scandal, that when such a case of medical conduct has to be tried at an Assize there should be so direct a conflict of medical opinion as this case exhibited. Moreover, it is most regrettable that questions which ought to be settled inside the profession should be taken into the law courts. There are domestic tribunals in the profession for the settlement of such questions. The great medical and surgical corporations have disciplinary powers and so have the older Universities. The Dublin University, of which Dr. KINGSBURY is a graduate, has, unlike some universities, ample powers, and applies them, when properly moved, to the consideration of particular cases. Somebody is to blame when such cases appear in the law courts and practitioners who are officials of certain public bodies yet speaking with only personal authority give evidence on opposite sides. This brings us to the real and very urgent lesson of the case with which nobody can be satisfied. Dr. KINGSBURY cannot, for—although he readily got a verdict in respect of the severe condemnation which was passed upon him for doing what had been done by his predecessors and had been done by him for thirteen years "with never a syllable of condemnation" from his immediate neighbours, who, indeed, had given him many indications of their respect—he must wish to know what the judgment of a professional tribunal would be on a question now so publicly raised. Much less can the profession be satisfied with a verdict which leaves the offence of personal advertisement altogether undefined.

It is amazing in how many forms this evil appears. Last year our attention was directed to the fact that in Southport the names of several of the local practitioners were advertised in connexion with different sanatoria. We have before us a testimonial on behalf of a certain kind of milk by a registered practitioner, who modestly takes the opportunity of saying that "his success in the treatment of children depends very much on his prescribing this article." In the "personal" columns of our leading daily contemporaries very unexpected names occur with intimations that the distinguished practitioners are out of town and will return on a given date. It is the more serious when we learn that such paragraphs are generally paid for—in fact, that they ar advertizements. But who is to blame for all this undefined and uncorrected evil? We have no hesitation in saying that for this want of definition the medical licensing bodies and the General Medical Council are to blame. This Manchester case could not have happened more opportunely to emphasise their responsibility. It so happens that the Executive Committee of the General Medical Council has the whole subject under its consideration. It will do a great public service if it will move the Council to stimulate the medical authorities to lay down definite rules which can be understanded of the profession in all its ranks and which will be a guide to the medical press in the discharge of its important and very difficult ethical functions.

No department of clinical observation shows more strikingly the untiring endeavour of the physician to advance the precision of his art than does that of examination of the blood. The appearance of new methods fo:

doing so are constantly recurring. No process of observation is too laborious for the workers in this field. Since MALASSEZ and GOWERS first introduced the counting of corpuscles and the estimation of hæmoglobin hardly a year goes by without some fresh attempt at improvement of the original methods or at supplementing them by others. Hæmatocytometers as now obtainable are instruments of precision; comparable instruments will from the same sample of blood yield countings differing by less than 0·5 per cent. In the same film used for enumerating the coloured corpuscles the colourless may also not only be enumerated but accurately subdivided into sub-groups, arranged according to their morphological characters, and each of these again be accurately counted. To EHRLICH of Berlin we owe the earliest systematic attempt to appreciate abnormalities in the relative numbers of the different species of the colourless blood cells: he first drew from them distinctions now recognised by the clinician to be of value. Upon his system of testing the cells by the affinities of their granules for certain stains rest the terms basophile cells, oxyphile cells, &c., now common in clinical reports on cases of leukæmia and anæmia.

In the important matter of the specific gravity of the blood we in this country have been in advance of continental clinicians. This has been, no doubt, because we have had the advantage of the ingenious method devised by ROY. When blood-letting was a matter of frequency, and routine quantities sufficient for easy estimation of blood-density must have been readily obtainable, but few of the opportunities seem to have been used. By ROY'S method the specific gravity of a fraction of a drop from the finger can be rapidly determined; by subjecting a further fraction of the same drop in a vaccine tube to the action of centrifugal force on a small turn-table the density of the fluid of the blood apart from its corpuscles can be in a few minutes by the same method measured.

Of all methods of clinical examination of blood the estimation of the amount of hæmoglobin is the least satisfactory; the drop required is so large as to be sometimes obtainable with difficulty; great care is necessary to ensure an illumination of light approaching standard quality for comparison with previous and future measurements; the tint of the blood is altered not only in depth but in quality by its dilution during the estimation; the colour sense of observers differs, so that, as HEMING says, even the normal sighted may be divided into those with bluish vision and those with yellowish vision; from WEBER'S law we know the degree of difference distinguishable between comparable tints to vary not only with their quality but with their mere intensity. These and other difficulties make the hæmoglobinometer—charmingly simple instrument as it seems—a pitfall to students and others unpractised in its application. Results given by it must always be received with caution unless the conditions under which they have been obtained are known to have been correct. It is in clinical hæmoglobinometry that improvement is most wanted and probably most soon to be expected.

A class of observations on the blood beginning now to be fairly numerous comprises those dealing with its osmotic tension and its alkalinity. The importance of inorganic salts in the body is not likely to be underrated, for the organism will longer survive the withholding of all food than the withholding of inorganic salts from the food administered. The inorganic salts are not merely to replace those of the excreta, nor is it correct to consider them valueless as a source of energy within the body. Osmotic pressures are produced by them in the tissues—that is, in the cells and fluids of the body; and in virtue of those pressures they do perform an important amount of work. The cells are permeable by molecules of water, some, it is true, in one direction only. By molecules of salts many cells are only partly permeable, the degree of permeability varying with the species of the cell and the species of the salt. In a cell as outcome of its vital chemistry the number of molecules increases by decomposition of individually more complex bodies into others severally simpler. The increased number of molecules in the cell fluid increases the osmotic tension in the cell. Movement is thus set up in a direction depending upon the permeabilities of the cell, the molecules of the salt being restrained from free passage out under the pressure by the only partial permeability of the cell for them; the cell does not, however, hinder the entrance into it of the molecules of water in the fluid bathing its periphery. These movements lie at the root of absorption, transudation, and secretion. To KOEPPE we owe chiefly at present the clinical observations on the osmotic pressure of the blood; it offers a large field for investigation, for he finds it to vary considerably. In normal persons he finds it greatest soon after midday dinner. Probably closely connected with the variations in the osmotic tension of the blood are the variations in its alkalinity. It has been recently pointed out by KOEPPE, and in these columns by Dr. HUTCHISON,[1] that after the taking of food the blood becomes more markedly alkaline. That is, of course, the time when the acidity of the urine is least. Both phenomena are probably the reverse side of the process that results in the appearance of free acid in the gastric contents. It would appear that in few diseases is the alkalinity of the blood increased, whereas it is diminished in a large number. The clinical estimation of the alkalinity of the blood is not without its difficulties and sources of error, but it rightly attracts an increasing number of observers. It is always to be remembered that however valuable a series of observations on the blood carried out carefully for any one of the above-mentioned estimations may be, it is always greatly, indeed, surprisingly, enhanced by the coincident performance of other estimations dealing with some or all of the other characters of what Faust called the "*ganz besonderer Saft.*"

THE correspondence which during the past six weeks has arisen out of the article entitled "A Case of Functional Aphonia in Man, Treatment, &c., with Special Reference to so-called Varicose Veins at the Base of the Tongue," contributed to these columns by Dr. H. TILLEY,[2] is instructive. It demonstrates the existence in clinical interpretation of more than one familiar fallacy, and would be hardly calculated to tend to exalt the present position of lingual and laryngeal pathology, were it not that the preponderance

[1] THE LANCET, March 7th, 1896.
[2] THE LANCET, Feb. 15th, 1896.

of opinion lies very much in one scale. The whole matter in debate turns upon (*a*) the existence of lingual varix as a definite morbid state; (*b*) the symptoms associated with the condition when it does exist; and (*c*) the proofs that (*a*) and (*b*) are etiologically related. It is remarkable how divergent are the opinions that have been expressed upon the first of these points. Dr. TILLEY has not seen a genuine condition of varicose veins at the base of the tongue; nor has Professor CHIARI, as reported by Mr. FOURQUEMIN. Dr. MCBRIDE thinks they are very rare. Dr. WATSON WILLIAMS believes the condition often exists but that its importance is exaggerated. Mr. BUTLIN, Dr. DE HAVILLAND HALL, Dr. GREVILLE MACDONALD, Dr. SEMON, and Mr. C. J. SYMONDS endorse the opinions of Dr. TILLEY and Dr. WATSON WILLIAMS. Mr. LENNOX BROWNE, on the other hand, asserts by his writings, which appear to have been the earliest on the subject, that lingual varix is very common; whilst Mr. WINGRAVE points out a fallacy in its recognition. Of course, if it could be shown that the condition never occurs there is no more to be said. But granting it to exist in varying degree and extent, is it of any material significance? Here, again, we find two camps—those who believe it is of little or no importance and those who, like Mr. JAKINS, hold and teach that "varix of the tongue is one of the objective causes of many subjective throat symptoms." Mr. LENNOX BROWNE may be considered the pioneer in this teaching also, but even he declares that amongst these objective symptoms "functional aphonia" is not to be reckoned, and in a further letter which we have received from him he repudiates any implied charge that such a relationship is taught at the Central London Ear and Throat Hospital. Whether this be so or not—and the opinion that any one man may have of the teaching in this particular school has nothing to do with the merits of the matter in discussion—Dr. TILLEY certainly has met with cases, three of which he detailed in his paper, where functional aphonia had been treated by cauterisation of alleged varix of the tongue. So that at any rate it would seem that by some persons the general teaching of the importance of lingual veins has been specifically applied to the treatment of functional aphonia. "Functional aphonia" apart, it may still be asked whether there has been adduced any sufficient reason for the adoption of such a treatment as cauterisation of a condition which, in the view of the majority of those who have addressed us, is of no material importance whatever. The letter of Dr. HARCOURT COATES supplies an answer, and we are bound to say that nothing has been advanced to prove that dilated or varicose veins at the base of the tongue (the very existence of which seems largely a matter of individual bias) are ever concerned in the production of symptoms of such gravity as to require their radical removal. There has been little evidence adduced in support of the main thesis that these vascular changes do play a part in the production of laryngeal disorder; whilst, on the other hand, there has been very positive proof that patients may be submitted to such cauterisation without any resulting good. On the whole, in spite of the fact that Mr. LENNOX BROWNE has within three years seen no fewer than 438 examples of lingual varix out of a total of 1547 patients, it is impossible to escape from the conclusion that it can only be exceptionally necessary to deal radically with what is, after all, an unimportant departure from the normal state of the bloodvessels in this region.

Annotations.

"Ne quid nimis."

THE PASTEUR MEMORIAL.

THE British section of the international memorial to Pasteur has now assumed definite shape, and the provisional committee, which already includes the names of the Duke of Devonshire and the Duke of Westminster and many distinguished men of science from all parts of the United Kingdom, held its first meeting last Friday at the rooms of the Royal Society, Burlington House, under the presidency of Sir Joseph Lister. It was unanimously decided to apply for subscriptions towards the erection of a monument to Pasteur in Paris from persons in the United Kingdom, India, and the colonies interested in science and the various industries which have been benefited by Pasteur's labours. An executive committee was formed, consisting of Sir Joseph Lister, Sir John Evans, Sir Henry Roscoe, Dr. Thorne Thorne, and Professor Percy Frankland (honorary secretary). Subscriptions may be sent to Sir John Evans, who will act as hon. treasurer, at the Royal Society, Burlington House, S.W.

THE LONDON WATER BILLS.

AFTER the introduction of Lord James's Bill in the House of Lords last Monday week proposing the creation of a water trust it was not surprising that the Water Bills of the London County Council relative to the acquisition of the entire property of the eight companies should be rejected. The supporters of the Government argue that it is for this newly created trust to decide as to future policy, and the outside bodies being represented on the new committee would be in a better position than at present to make any desirable arrangement with the companies. The arbitration clauses in the London County Council Bill should, in the opinion of Mr. Chaplin, be abandoned, because if these Bills were allowed to proceed they would entail enormous cost and trouble on the parties interested without resulting in any compensating advantage. On the other hand, the London County Council urge that purchase, if it is to take place at all, must take place quickly, otherwise the addition of capital which is being proposed by some of the companies would advance the value of the undertakings by 22 per cent. The consensus of opinion in the House of Commons last Tuesday appeared, however, to be that the County Council were proposing terms unfair to the companies and their shareholders, and that the County Council had been to blame for approaching the companies in a confiscatory spirit and a spirit of extortion. As suggested by Mr. Chamberlain—and there is no better authority on municipalisation—terms so exorbitant and so unreasonable could not be conceded by the Government or the other interests concerned. If, he added, the County Council would accept the proposal made by Mr. Chaplin to allow the five Bills promoted by the water companies themselves to go forward, subject to an instruction to the committee to limit the operation to works required for such an increase of th water-supply as was needed in the public interest, they might even now retain the Bills, and at the end of the session a new water trust board would be constituted with

full power to carry out an amicable agreement with the companies or, if necessary, to go to arbitration under the compulsory clauses. Since the County Council Bills were, however, in direct conflict with the object of the Government Bill the Government had no alternative but to oppose the second reading. On the House dividing there were for the second reading 125 and against 287, giving a majority of 162 for its rejection.

A POOR-LAW MEDICAL OFFICER AND THE AGED POOR.

AT a meeting of the London and District Poor-law Officers' Association, held in the board-room of the Islington guardians, St. John's-road, Upper Holloway, on March 20th, Mr. R. W. Wilson, the Medical Superintendent of the Croydon Union Infirmary, moved the following motion: "That in the opinion of this meeting of Poor-law officers the time has arrived when boards of guardians should take into their serious and earnest consideration the necessity of providing for the aged and infirm inmates of the workhouses accommodation which will be more suitable to their infirmities and other requirements than now exists. That such accommodation should be separate and apart from the workhouse, and be under the superintendence of a medical man assisted by a nursing staff rather than, as at present, under the control of a disciplinarian; with such altered circumstances greater latitude could be allowed and privileges afforded the deserving and genuine poor (subject to certain restrictions) which are now impracticable under the existing workhouse regulations." In moving this resolution, Mr. Wilson said that he did not wish in the slightest degree to reflect adversely upon the humanity of workhouse masters or to suggest that they were unfit to have under their control the aged and infirm. He had been connected with the Poor-law for some years, and the feeling had grown stronger in him year by year that the housing of the aged and infirm in the same building as the able-bodied was altogether undesirable, hence he had been led to propose the resolution which was before them that evening. The reluctance which respectable people had in entering a workhouse was in part caused by the dread of having to associate with disreputable companions and by an exaggerated fear of the discipline and interference with absolute freedom which were imperative in such establishments. To the aged and infirm this strict adherence to routine was bound to prove irksome, and however much the master might wish to make their remaining years as happy and comfortable as possible the discipline which had to be maintained and the regulations which had to be observed frequently debarred him. To his mind a distinct, if not a complete, drawback to the various schemes for ameliorating their condition was the congregating together of the aged in large rooms. Under such a plan it was impossible for those in authority to make themselves acquainted with the individuality of those for whom they had to care and any little special relaxation or indulgence in the way of extra leave or diet immediately aroused the jealousy of the other inmates, and promoted dissatisfaction and disaffection. The scheme he would propose would be to have a series of small rooms where not more than six should live together. Meals would be served in the rooms of the inmates instead of in a large dining hall as at present, thus allowing greater latitude in the way of diet; and dormitory accommodation would be on a similar plan. It might be argued that his scheme would not allow of discipline being maintained, but he did not think that a larger amount of liberty would be prejudicial to discipline. He would go farther and say that the alteration in the structural arrangement of the workhouses which would permit of complete classification would tend to the reclamation of the incorrigible and vicious. As regarded the latter part of his motion—that the building should be under the direct control of a medical man—he did not seek to provide appointments for his own profession; he was thinking only of the interests of the aged and infirm. In such an institution as he advocated a medical officer would be a necessity in any case, and inasmuch as the present Poor-law infirmaries were administered by medical men, why not have a medical man to administer this institution. As a rule a medical man could better attend to the requirements of the aged and infirm than a layman. He was of the opinion that the infirmaries should be kept entirely for the acutely sick, whose recovery was frequently retarded by association with the aged sick. In connexion with the proposed infirm house he would provide sick wards for those who were totally disabled or were afflicted with the maladies incident to old age. In regard to the nursing staff there were many elderly nurses who did not come up to the standard now required of infirmary nurses, but who were excellent and worthy women. These were the women he would employ, and they would also be able to look after the management of the day rooms as well as the wards of the sick bay. In conclusion, he believed that the time was coming when this question would have to be faced seriously, and the humane and generous treatment of the poor was an advance he for one would do all he could to help. He did not wish to advocate fancy ideas in any way; on the contrary, he was sure the scheme he had brought forward that night was practical and could be carried out successfully.

THE ALLEGED MURDER BY A LIVERPOOL DENTIST; ACQUITTAL.

HERBERT WESTWORTH, a Liverpool dentist, was arraigned before Mr. Justice Kennedy at the present Liverpool Assizes for the murder of his wife under the following circumstances. About midnight of Dec. 12th last Dr. Gordon was hastily summoned by the husband to the deceased on account of flooding. She was a woman of intemperate habits, who had had children but none recently. As she had on one or two previous occasions had a free discharge after delayed menstruation Dr. Gordon did not attribute as much importance as he otherwise would to the hæmorrhage. He found her lying on a sofa in a state of unconsciousness from drink and bleeding from the vagina. With the help of her husband he carried her upstairs to bed and plugged the vagina with lint. Early the next morning she died. On removing the plug wounds were found in the vagina and consequently the coroner was communicated with. A post-mortem examination revealed between forty and fifty recent bruises on the legs and arms and four wounds in the vagina. Of the latter one was just inside, near the orifice of the urethra; a second an inch higher up, also on the front wall (these only penetrated from half an inch to one inch); a third at the left-hand top corner, which went into the left broad ligament causing a great deal of extravasation of blood, but did not enter the peritoneal cavity. The fourth wound passed out once into the peritoneal cavity between the bladder and uterus, struck the top of the sacrum, perforated the tissues in front of the spine, ran alongside the aorta, entered the peritoneal cavity again near the left kidney, perforated the mesentery of the top of the jejunum twice, and passed through the left kidney. A second plunge had sent the instrument up to the pyloric end of the stomach, which was bruised, but not perforated. Other parts of the bowel, mesentery, and omentum were bruised. The first three wounds in the vagina would admit the little finger, but the fourth was much larger. The deceased was found not to be pregnant and the uterus was quite healthy. Blood was found in quantity on the deceased's clothes, but only a few spots on the prisoner's clothing. It was also found on the wooden handle of a small brass poker in the room.

It was admitted by all the medical witnesses that death was due to shock from the injuries and consequent hæmorrhage, and that the instrument used might have been the small poker, which must have been cleaned after being used. Mr. F. T. Paul, called on behalf of the Crown with Dr. Gordon and Mr. Barnes, held that the bruises could only have been made with a heavy instrument such as the round head of a poker, as, though most of them were small, the extravasation of blood penetrated deeply into the muscles. They also held that it was physically impossible for such internal injuries to be self-inflicted. Mr. Whitehead of Manchester, Dr. Bennett, and Mr. Mulliner, held, on the contrary, for the defence, that the bruises might have been all caused by Dr. Gordon and the husband carrying the deceased upstairs. The internal injuries caused by the poker they maintained, were self-inflicted. Mr. Whitehead was sure the deceased would have had ample power to inflict these injuries from behind whilst lying on the left side of the sofa, and considered that this was a rational effort to procure abortion, if any such effort could be called rational. At the post-mortem examination Mr. Paul, Dr. Gordon, Mr. Barnes, and Mr. Mulliner were present, whilst the body was not seen by Mr. Whitehead and Dr. Bennett. The theory of the defence rested, amongst other points, on the statements alleged to have been made by the deceased to a female witness, as sworn to by her at the trial, that she would have no more children and that she "would take care that none would come." The judge summed up, stating the points which were greatly in the prisoner's favour, who, after a few minutes' deliberation on the part of the jury, was acquitted.

DECIDUOMA MALIGNUM.

THE Johns Hopkins Hospital Reports, vol. iv., No. 9, contain an able monograph by Dr. J. Whitridge Williams on "Deciduoma Malignum." The author reports his pathological examination of a case, and makes a critical review of the literature of the subject hitherto published. Up to the present twenty-five cases of this kind have been described under the names of deciduoma malignum, sarcoma uteri-deciduo-cellulare, or by more or less cognate terms. Dr. Williams' case (originally under the care of Dr. C. Harris of Baltimore) was that of a negress aged thirty-five. She had had five pregnancies, the third ending in a miscarriage at the ninth month and the others at full term. The puerperium in the confinement for which Dr. Harris attended her (the labour was slow but otherwise normal) was not entirely normal, the temperature remaining at about 100° F., and she felt very much prostrated. A fortnight afterwards a painful nodule appeared on the right labium majus, which gradually increased in size and ulcerated, until it became a large sloughing mass which occupied nearly the whole of the right labium and the adjacent tissue, in the centre of which there was a large fistulous opening into the rectum through which pieces were discharged. Death ensued in about three months from septicæmia. At the necropsy, in addition to the local mass, the left lung was seen to be occupied by a large number of irregularly-shaped round or oval nodules varying in size from that of a pea to a walnut. They were greyish-red in colour; some presented soft, greyish areas in their centre. They easily broke down under the finger, were readily enucleated from the surrounding lung substance, and closely resembled placental tissue in appearance. The right lung was likewise studded with large numbers of similar nodules. The heart was normal. The liver presented numerous hæmorrhagic nodules. The spleen was enlarged and contained several small metastases. In the kidneys were several dark-red hæmorrhagic areas. Dr. Williams details a most careful microscopic research which may be briefly summed up as follows:—He had to deal with a remarkable new growth. The greater part of the original tumour, as well as the metastases, were made up of blood, which was either free in the tissues or enclosed within cavities formed by the tumour cells, whilst its cellular part was composed of large elements, some of which appeared as epithelial cells (?) and others as larger or smaller protoplasmic masses or syncytium. Nowhere in the tumour could any trace of bloodvessels or reticulum be discovered, and it appeared to be composed solely of epithelial cells (?) and masses of syncytium, which were grouped together with apparently no attempt at tissue formation, but which lay free in areas of hæmorrhage without apparent integral connexion with the surrounding tissues. The metastases presented the same characteristics and appeared to be thrombotic or embolic masses of cells which multiplied in the vessels and caused their rupture, with consequent hæmorrhage into the surrounding tissue. In these hæmorrhagic areas the cells would seem to have lived on and multiplied until they formed masses too large to be nourished simply by osmosis, when they underwent necrotic changes. In connexion with this subject it should be noted that the April meeting of the Obstetrical Society, to be held on April 1st, promises to be of unusual interest. Papers will be read by Dr. Herbert Spencer, Dr. Eden, and Mr. Rutherford Morison of Newcastle on that grave and remarkable disease—deciduoma malignum. Sänger, eight years since, described a case of malignant disease of the uterus following abortion with metastases in the lung and elsewhere made up, like the primary tumour, of decidual cells. Some of the cases followed normal pregnancies, others occurred after abortion. No case has as yet been fully reported by any observer in the United Kingdom. We believe that some British authorities are inclined to look upon the disease as simple sarcoma aggravated by gestation. Fellows of the Obstetrical Society look forward to an interesting discussion.

THE CUSTODY AND CARE OF PAUPER IMBECILES.

AN inquest upon the body of a Southampton pauper imbecile, who committed suicide three weeks ago, proved a lengthy affair before it was finally concluded on March 17th. It was twice adjourned on the protest of the coroner (Mr. W. Coxwell) as to the guardians' responsibility in the matter. The man, who was subject to epileptic fits, was allowed out occasionally and considered "safe." The male imbeciles number 45, and in addition the male nurse on night duty had to look after 104 patients in the infirmary. He was administering medicine to a patient in the infirmary when it was reported that the lunatic in question was missing, the wards in the nurse's absence being in charge each of a wardsman. The place was searched, but the man had got off the premises, and before he could be captured jumped from a bridge on to the railway. The first inquiry was adjourned to allow the Local Government Board to be communicated with. The Board was not, however, represented subsequently. The coroner said it seemed that the workhouse was overcrowded, that the sick wards had been used for imbecile wards, and that the Local Government Board had three years before made certain representations in the matter. Mr. Russell Bencraft, medical officer to the Southampton Workhouse, thought forty-five imbecile patients too many for one nurse to properly attend to, added that there was insufficient accommodation for more attendants, and said that the guardians had practically made all the provisions they could to relieve the overcrowded portions of the house. A passage of arms occurred between the coroner and the clerk to the guardians (Mr. C. C. Smith) when the former asked for the correspondence with the Board alluded to above. Mr. Smith said the coroner had no right to call for correspondence as to the workhouse

generally, but only as to the imbecile wards. The coroner rejoined that he did not "intend to be made a puppet of," and that he did not see why the guardians should object unless there was something behind the correspondence. Ultimately, after much evidence in detail, the jury found a verdict of "Suicide whilst of unsound mind," and while exculpating the guardians expressed the opinion that the outer wall might be better protected. We are sorry that we cannot compliment the guardians of the Southampton Workhouse on the above case. The several points of alleged overcrowding, of the use of the sick wards of the infirmary for the housing of imbeciles, and the apparent insufficiency of the nursing staff are one and all of serious import in the administration of the Poor-law, in such a place as Southampton especially. Whatever may be said as to the finding of the jury in the particular instance, there must clearly have been blame attaching somewhere to enable the pauper lunatic in question to escape in the night time, and the story as related raises the question as to how it came about that there is but one male nurse on night duty and saddled with the care of 150 patients, 45 of whom are imbeciles. There were, it is true, wardsmen also on duty, but were these men merely pauper inmates of the workhouse or were they trained attendants? A system by which untrained pauper attendants are placed in positions of trust towards their unfortunate fellows who chance to be in ill-health is one that should cease at once; it has, in fact, been too long tolerated already. And we think it goes without saying that where infirmary wards have been designed for patients in excess of the nursing staff that can be accommodated, steps should be taken in some way to ensure that the inmates shall have adequate attention of the right kind. Where, as would seem to have been the case in the present instance, the infirm wards are used as imbecile wards any overcrowding of patients is to be the more deplored.

STREET NOISES.

WE are very glad to see that an attempt is being made to deal with an intolerable nuisance. Mr. Jacoby, Mr. Arnold Forster, Mr. Boulnois, General Goldsworthy, Colonel Sandys, and Mr. J. W. Sidebotham have brought in a Bill which provides for the registration of itinerant musicians, makes it an offence for any such to ring at a door and ask for money, and in addition contains a clause to the effect that persons "who, in the vending or attempt to vend any articles, &c., loudly and persistently call out or shout," shall render themselves liable to a fine or imprisonment in default. This is really admirable, and we exhort every member of the House to vote for this Bill. Piano organs, German bands, &c., are bad, but they are nothing to the howling ruffians who yell "Winner!" and "Extry!" The Strand from eleven A.M. till any hour at night is a perfect pandemonium. Nor are the quarters of the town further removed from newspaper land exempt. Kensington is virulently infested with these pests. We believe the professional title is "runners" Their favourite trick is to "work" a street in couples, both have voices compared to which a fog-horn is as dulcet as a nightingale, and taking one side apiece of the street they bellow, a semitone apart, horrific and unsavoury details of tragedies which generally, be it said, have never happened. Even on Sunday there is no rest, for then the nuisance is continued by shrill-voiced infants, who, judging by their articulation, all suffer from adenoid vegetations. Be it understood that we do not object to Sunday newspapers, it is the yelling which galls. While Mr. Jacoby is about it he might insert a clause to squash "The Society for the Relief of Distressed Washerwomen," or some such name, which drops teaspoons, scissors, soap, soda, metal polish, hairpins, and other articles into letter-boxes, with an intimation that the collector will call for the article and take it away if not approved of. Of course householders can, and probably do, destroy the things, but that does not mitigate the nuisance of some one having to answer the bell. But the newspaper fiend is the worst pest, and if Mr. Jacoby can only reduce him to silence he will rank with Jenner, Lister, Peel, and Raleigh as a benefactor to his country.

A BETTER WAY AT THE AQUARIUM.

WE had occasion some time ago, under the heading "A Beautiful World," to comment upon the hideousness of the average English poster. We have also lately felt bound to protest against certain most undesirable forms of "entertainment" at the Aquarium, but for the latest show at this place—namely, that of artistic posters—we have nothing but praise. The French are still far ahead of any other nation in this particular line of art, but England may well be proud of the posters of Dudley Hardy, the Brothers Beggarstaff, Bernard Partridge, and Paleologue. The day cannot be far distant when the wearied eye and brain will be refreshed in the street with many more artistic posters than at present. No. 70, by De Feure, a harmony of blue, green, and violet, is most refreshing. The artistic poster is as much a constituent of a hygienic life as a beautiful building.

THYROID PREPARATIONS IN ENLARGEMENT OF THE THYROID GLAND.

DR. STABEL, assistant of Professor von Bergmann, stated at a recent meeting of the Berlin Medical Society that he has treated ninety-three patients partly with an extract of fresh thyroid glands of wethers and partly with thyroid tablets. In twenty-five cases glands of freshly slaughtered animals reduced to a pulp and mixed with water were used exclusively, the average quantity taken by a patient in a week being 20 grammes, although in some cases it rose to 34 grammes. In the hot season the patients complained of slight gastric troubles, which, however, disappeared as soon as the thyroid preparation was preserved in ice. There was only one instance in which the treatment had to be discontinued on account of its disagreeing with the patient. The thyroid gland regained its normal dimensions in only four of the twenty-five patients treated in this way, and in only two of these four was the good effect permanent, for the other two had a relapse after the expiration of a month. In all the other cases there was an obvious reduction in the size of the gland, and with two of the patients this was permanent, but it generally began to swell again whenever the treatment was stopped. The frequency of the pulse was a little augmented, but never so much as to make an interruption of the treatment necessary. A number of patients after having taken the fresh glands for several weeks were then treated by tablets. In another series these tablets were used from the beginning of the treatment. The results were much less satisfactory. In the first series the average diminution of the circumference of the neck was 3·3 centimetres, and in some cases even 6 or 8 centimetres, but in the series to which tablets only were administered the reduction was no more than 0·9 centimetre; in three cases an increase of the circumference of the neck was observed. According to Dr. Stabel this failure of the tablets is due to the fact that they were not able to give the same quantity of them as of the pure extract without producing serious troubles, for after the administration of half a tablet or a tablet and a half, each containing 0·3 gramme of the extract, the pulse at once rose to 150 per minute and remained so for weeks even although the remedy was no longer given. Dr. Stabel further mentioned the case of a man who took a large quantity of tablets in the hope of reducing his obesity and became maniacal within a few

days; œdema of the brain was found at the necropsy. Thyroid extract was used also for Graves's disease, but neither the pure extract nor the tablets had any favourable influence. In some cases the pulse became more frequent and the general state worse, so that thyroid treatment is contra-indicated in Graves's disease. In the subsequent discussion Professor Ewald said that he had treated nineteen patients with tablets, but in no case did the goitre disappear entirely. The gland sometimes became smaller, but not unless the patients were young, and the effect was only temporary. He did not observe the complications mentioned by Dr. Stabel, but he only used tablets sent from England, whereas those administered by Dr. Stabel were made in Dresden. Perhaps the former preparation was better. Dr. Mendel and Dr. Senator agreed with Dr. Stabel that thyroid treatment should not be used in Graves's disease.

LIABILITY OF THE COUNTY COUNCIL FOR MEDICAL CHARGES.

Is the County Council responsible to medical men for services rendered in response to calls by the officers of the parks of the County Council? The question is a very proper one and was raised in an action brought in the Wandsworth County-court before Judge Lushington by Mr. John A. Bouck with regard to the treatment of a child for an accident sustained in the park involving a wound in the tongue causing danger of fatal hæmorrhage. The County Council, always free in its use of the ratepayers' money, pulled up at the claim of the medical profession, though the practititioner was called in by its own officer. Mr. Tanner, in its defence, submitted that under no circumstances could the County Council be liable for a person who was injured whilst attending a public park for recreation. Unfortunately the judge threw no light on the important question though admitting the public interest of it. He urged that the parties should talk it over. In the end Mr. Tanner agreed to pay, and the plaintiff to accept, half a guinea, but Mr. Tanner did not agree to judgment for that amount and required the case to be struck out. This is most unsatisfactory.

MANCHESTER MILK-SUPPLY.

AT a recent meeting of the Manchester Medico-Ethical Association the indefatigable medical officer of health of Manchester, Dr. Niven, read a paper on Improved Milk-supply. He adverted to the fact that in Manchester (and, it might be added, in many other places) it is often supplemented by unsuitable materials for infants as bread, soup, and meat, and said that many of the poorest people considered they could not afford milk, which would be wasteful economy if that supplied to them "were not itself of so destructive a character." This is, of course, a serious charge, but he proceeded to justify it by describing the dirty condition of the samples he had obtained, the worst specimen not coming from a poor quarter of the city, in all of which there was a deposit of dirt, in three of the samples quite a thick layer. Milk was eminently adapted for the growth of numerous injurious micro-organisms, "and in its passage from the cow to the consumer it was sown with micro-organisms in plenty." Though giving credit to many of the cowsheds in and around Manchester for being clean and well ventilated, he said there were a large number that were dark, dusty, and malodorous, with a space allotted to each cow insufficient for a human being, and that the milk, in fact, received its grossest pollution at the source. The corporation had done much to reduce adulteration with water "drawn, it might be, from a well lying below the farm midden or dug in the middle of a well-manured field." He attributed to the state of the milk-supply "a large share of the immense death-toll from wasting diseases, from tubercular disease of the bowels, and from summer diarrhœa." He said that the statistics of mortality and experimental evidence clearly indicated that children largely contracted tabes mesenterica through being fed on milk from tuberculous cows. Tracing the steps that had been taken in this country for improving the milk-supply, he said the provisions for the protection of the public had hitherto proved unavailing. Dr. Niven then gave an account of the working of the Copenhagen Milk Supply Association and spoke of the wonderful progress made in America in the direction of a pure supply. Sir Bosdin Leech and Alderman Walton Smith, chairman of the sanitary committee, were present as visitors, and the former described what he had seen at Copenhagen. From small beginnings the company was now dealing with the milk of 6000 or 7000 cows distributed over fifty farms. Veterinary surgeons inspect and report on the health of the cows, the conditions of shippons, &c. The servants handling the milk are required to observe scrupulous personal cleanliness, and, indeed, all throughout cleanliness is the central aim. He strongly supported Dr. Niven's suggestion for the formation of a company similar to that at Copenhagen. Dr. Ashby pointed out that those who advocated the formation of a dairy company did not suggest that it would do away with the evils of back-to-back houses and other insanitary arrangements, but it would cope with one very serious danger, especially to young children. "What was wanted was an institution where not only pure milk could be obtained, but which would include a laboratory in which milk could be prepared in accordance with the prescriptions of medical men." Numerous members took part in the discussion. Alderman Walton Smith said that the sanitary committee so far took cognisance of the adulteration of milk by water and the abstraction of fat, but Dr. Niven had opened his eyes to the need of other means of protection. Many letters have appeared in the local papers since this meeting took place, in some of which microbes are not treated with respect, and many objections are made to Dr. Niven's suggestions, but the writers do not seem to realise that they are simply advocates for dirt instead of cleanliness.

FLOODS IN THE THAMES VALLEY.

"Let wealth and commerce, laws and learning, die,
But leave us still"—our old Thames floods.

ANOTHER blow is about to be inflicted upon the privileges of Eton. That ancient foundation "has suffered many things at the hands of physicians and ....," but we will not pursue the quotation. Parliamentary Commissions have worked their will upon her, and one by one her ancient privileges are fast disappearing. If there was one matter—not, perhaps, peculiar to Eton, but intimately bound up with her life—which it might be thought a Government—and, above all, a Conservative Government—would spare, it is the Thames flood. And yet we see that a deputation, including the headmaster of Eton, has approached the Board of Trade with reference to the prevention of floods—nay, more, Mr. Ritchie has promised that the Board would use its "persuasive powers"—delicate euphemism!—with the Thames Conservancy to get them to lend a sympathetic ear to the deputation. Unless Eton boys have changed since we knew them they will rise in revolt and be in full sympathy with what a distinguished Etonian has written. "Can ye bridle the deep sea with chains"? is a question which may well be asked of the Thames Conservancy—for, after all, the Thames is a branch of the sea. If there are to be no floods how many of the pleasures of the football and Easter halves will be done away with. Gone will be the delightful discomfort undergone when "my tutor" would announce at dinner that no more coals or beer were procurable since there were four feet of water in the cellars. Never more will boys come in to school half an hour late

with "Please, sir, I couldn't get a punt," or be able to show up a "dem'd moist, unpleasant" piece of paper with blotted *y*'s and *x*'s on it, as "My extra work, sir; it fell into the water." Really Dr. Warre ought to know better. True, the distress in the low-lying parts of Windsor is terrible during the flood and of course sentiment must give way to hygiene, but often in the toil of London life we long for a sniff of the old Thames mud—the alluvial slime which covered everything in the brave old days when the waters swirled along "Judy's-passage" and Gasworks-lane was full of water and drowned pigs. None the less we trust that measures will be taken to prevent these floods and their disastrous consequences.

THE PUBLIC AND POISONS.

A VERY short time ago we commented on the ease with which the public from time to time obtain large quantities of poisonous substances in spite of the laws which are meant to prohibit the sale of poisons. In the case referred to the poison was arsenic, which was sold mixed with other substances for the purpose of killing weeds, and now a further example is afforded by a case which occurred at Tenbury, in which a man was prosecuted for selling strychnine in large quantities. It had been thought for some time that poison had been obtained in the district owing to the death of several animals, and in this particular case a shilling's worth of strychnine was sold which the analytical chemist declared was sufficient to poison a small army of men. It is without doubt most important to prevent the illegal sale of such poisons and every possible means should be used to check it.

DOSING OF INFANTS.

A NINE months' old baby had a cough and was also troubled with its teeth. The mother, on the advice of a neighbour, mixed a pennyworth of castor oil, a pennyworth of laudanum, and a pennyworth of syrup of rhubarb, and gave the child a teaspoonful of the mixture. It had the desired effect of composing the infant, but so effectually that the child never woke again. And this is an enlightened age, when ignorance and carelessness of such a kind do not come under legal restrictions. Such cases are not uncommon, but that by such means the surplus population is weeded out is not sufficient justification for their occurrence. The responsibility which the officious neighbour took upon herself in prescribing deadly poison for another woman's child was a very serious one. It would not have been so lightly taken had she understood that in the event of her unintelligent advice resulting in fatal calamity she might find herself in the dock on a very sound charge of manslaughter.

THE RESPONSIBILITY OF TREATMENT BY HYPODERMIC INJECTIONS.

AN inquiry was held by the coroner at Birmingham on the 23rd inst. relating to the death of a patient at the workhouse infirmary. The evidence showed that a man aged thirty-nine was admitted with acute bronchitis and an affection of the heart. The visiting physician, Dr. Short, ordered a hypodermic injection night and morning of a solution of strychnine. The nurse in charge sent hurriedly for the resident surgeon on the evening of the 18th, saying that she had by mistake given the patient an injection of five drops of a morphia solution equal to half a grain. Notwithstanding all remedies used the man died some two hours afterwards. The nurse stated that she had given twelve injections of the strychnine previously at the required times. The morphia and strychnine bottles were both alike in style and colour and form of label. The cupboard, which contained about forty such bottles, had been cleared out on the previous day, and the bottles she supposed must have become disarranged. The jury returned a verdict of "Death from misadventure," and added two sensible riders which will commend themselves to the authorities of this and similar institutions—viz., that as far as practicable all poisonous subcutaneous injections should be given under the superintendence of the resident medical officers, and that the medical officers should exercise such supervision as to render it impossible for the nurse to obtain or administer any injection other than that prescribed for the patient.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

AT the annual meeting, held at the Medical Society's rooms on March 17th, Sir R. Quain, Bart., M.D. Lond., F.R.S., assumed office as President. The following officers were elected:—President-Elect: Professor A. Macalister, F.R.S. Vice-Presidents: Dr. Gilbart Smith; Sir J. N. Dick, K.C.B., Director-General R.N.; Professor Cuming, M.D. R.U.I.; and Dr. R. Heath. Council: Dr. Bourke, Dr. Davison, Dr. Lough, Dr. Mapother, Dr. Nesbitt, Dr. Scott, Dr. Waring, Mr. Bredin, Mr. Carter, Mr. Hartt, Mr. Stoker, Mr. William Thompson, Inspector-General Lloyd, R.N., Surgeon-Captain Jackson (Grenadier Guards), Miss Helen Webb. Honorary Treasurer: Mr. R. Jocelyn Swan. Honorary Auditors: Mr. R. O'Callaghan and Dr. H. G. Thompson. The same evening the members of the Association dined at the Café Monico, the President, Sir R. Quain, being in the chair. The company, which included many ladies, numbered 145, and among those present were Sir Spencer Wells, Dr. R. Thorne Thorne, C.B., Canon Fleming, Mr. R. Anderson, C.B., Judge Bacon, Inspector-General Lloyd, and Surgeon-Major Wolseley, A.M.S. After the usual loyal toast, which was proposed by the chairman, Dr. James Little proposed "The Navy, Army, and Reserve Forces," to which Inspector-General Lloyd, R.N., and Surgeon-Major Wolseley replied, the latter alluding to the recent Ashanti expedition, from which he has just returned. The toast of "The Guests" was proposed by Dr. Cagney and replied to by Mrs. Scharlieb, M.D. Lond., the Rev. Canon Fleming, and his Honour Judge Bacon. Dr. P. S. Abraham, chairman of the Council, replied to the toast of "The Association," which was given by Dr. Thorne Thorne, C.B. The health of the chairman was proposed by Sir Spencer Wells, and Sir R. Quain replied. During the evening songs were sung by Madame Ella Russell, Miss Edna Grove, and Mr. Edward Branscombe. The Association is to be congratulated on the success which it has attained.

THE CHARITY ORGANISATION SOCIETY AND THE METROPOLITAN HOSPITALS.

WITHIN a few years after its establishment this society took up the question of the better organisation of medical charities in the metropolis, and it has used its influence constantly to promote, especially in regard to out-patients, a more just and careful administration, and much of the improvement in the administration of relief at out-patient departments is due to the publications that it has issued and the meetings that it has held in advocacy of reform on this subject. Since the year 1887 it has urged that there should be established, after due consideration and with all regard to existing interests, some kind of central hospital board for the metropolis, and in 1889 a special committee of the society issued a petition for signature by medical men in London, and as a result the House of Lords granted that a Select Committee should be appointed to consider the whole subject. That Committee reported in the year 1892 and adopted the recommendations made by the society for the establishment of a central hospital board. In 1895 and 1896 the question was again mooted and a large and representative

meeting was convened, at which meeting there was a general feeling in favour of the establishment of some kind of central board. The council of the society think that any scheme for the formation of a central board should be in conformity with the following general conditions:—

1. The board should, to a large extent, consist of representatives of the hospitals, both medical and lay.
2. The board, while not encroaching on the functions of the Hospital Sunday and Saturday Funds, should have at its disposal funds sufficient to enable it to make adequate grants to hospitals towards rebuilding, extension, sanitation, and other special purposes.
3. The board should be a corporate body, so constituted as to command public respect and exercise public influence.
4. The board should have no compulsory powers, but should issue an annual and other reports, giving information as far as possible in a comparative form on various crucial questions connected with their administration.
5. The board should discuss the larger and more important questions of policy in full meeting, but should delegate to committees the chief part of its work of reporting and visiting—subject, of course, to the board's approval.

The board should be able so to fulfil the above conditions as to keep alive the voluntary character of the hospitals of London, and the council proposes that a large committee should be formed, representing both leading members of the medical profession and laymen interested in charitable matters in London, with a view to carrying out, as far as possible, the proposals contained in this memorandum. A list of the members of the new committee will then be published, and a small executive committee appointed. We think that this course of procedure might be productive of much good, especially with regard to the abuses now so prevalent in out-patient departments, and we can only hope that the proposed meeting of a committee will be successfully carried out.

THE MALE NURSES' TEMPERANCE COÖPERATION.

WE have received the report of this excellent institution for the period March, 1895, to March, 1896. We are glad to see that the work of the institution is increasingly appreciated, both the membership and the demand for nurses being larger than in the previous year, while the average earnings of each nurse has been at the rate of £101 16*s.* for twelve months. The fact that all nurses sent out by the society are total abstainers is of itself, if not an absolute, at all events a fair, guarantee for steadiness and trustworthiness during an engagement, for it removes one cause of complaint which used to be somewhat common with regard to male nurses. It is alleged that there is a disinclination on the part of the large London hospitals to afford opportunities to male nurses of undergoing professional training in the wards. Surely it would not be difficult to allow men who are willing and anxious to learn access to the male wards; by so doing the female nurses might be relieved of many anxious cases the nursing of which is a sore tax upon a woman, and for which she is scarcely fitted.

BRITISH GUIANA.

THE Surgeon-General of British Guiana, in his report to the Government Secretary for the twelve months from April 1st, 1894, to March 31st, 1895, states that the health of the colony has been fairly satisfactory. There was the usual amount of malarial fever, whooping cough, influenza, bowel complaints, pneumonia, and other chest affections, but there has been no case of small-pox or yellow fever in the colony for some years, and no other infectious disease prevailed. On the arrival of a ship from Calcutta with coolies in February, 1895, it was found that there had been three cases of small-pox among the crew, with one death. After twenty-one days in quarantine from the date of convalescence of the last patient, during which time no fresh case occurred, the coolies were landed and remained free from the disease. Of the five public hospitals in the colony that at Georgetown is by far the largest, having 700 beds. During the twelvemonth 8493 in-patients were admitted and there were 1177 deaths. There were also 38,798 out-patients, and it appears that this department is liable to be misused in Demerara just as in London, for a black lady who drove up to the hospital in a cab, on being informed by the medical officer that she was not seriously ill and that he could not attend to her, not only became very rude, but told him that the cab was her own and that she would consult a private practitioner. In the leper asylums there were 381 patients (294 males and 87 females) on April 1st, 1894; 75 were admitted during the twelvemonth, 65 died, and 48 "were discharged for various reasons, chiefly absconding and remaining absent from the asylum." The present Surgeon-General (Dr. D. Palmer Ross, C.M.G.) entered into office in August, 1894, in succession to the Honourable Robert Grieve, C.M.G., M.D., who had retired on a pension after many years of service in the colony.

THE ISLINGTON INFIRMARY SCHEME.

IT looks as if Providence was going to intervene on behalf of the ratepayers of Islington and save them from a costly scheme for patching up the present workhouse and infirmary accommodation, which for some years have been condemned by the Local Government Board and by public opinion. It has been known for long that the small-pox hospital in which Marson did his classical work has been superseded by the Metropolitan Asylums Board hospitals. The guardians have received a letter from the committee of the hospital expressing their willingness to consider the sale of the site on which the hospital stands. This was felt by the Board to be a possible escape from very great difficulties. The site would in many ways be a model one and there is practically no other in the parish. To do the advocates of the patching-up scheme justice they showed a creditable satisfaction with this overture. We trust that no petty question of two or three thousand pounds will induce the guardians to lose a site marked out for their purpose.

THE MEDICAL PROFESSION AND THE LATE MR. GEORGE RICHMOND.

MR. GEORGE RICHMOND, R.A., who died on March 19th, at the advanced age of eighty-seven years, had been for many years connected with some of the most eminent physicians and surgeons of the century. A close friend of Brodie, of Sir Thomas Watson, and of Sir James Paget, he drew or painted many of the leaders of medicine and surgery since 1832, when Dr. Fox of Brislington, was limned by him. Among physicians perpetuated by his brush may be mentioned Sir Henry Holland, Dr. Latham (a very beautiful head), Dr. Alison of Edinburgh, Dr. Bence Jones, Sir Henry Acland, Sir Thomas Watson, and Sir George Burrows, Presidents of the College. Mr. Richmond always spoke of the portrait of Sir Thomas Watson, now in the Royal College of Physicians of London, as among his most successful works. He loved the man and gave his whole heart to the pourtrayal of his venerable and kindly face. The surgeons drawn by him were no less remarkable and include Partridge, Keate, Hawkins, Professor Syme of Edinburgh, Richard Quain the anatomist, Sir William Bowman, and Sir James Paget. In early days he drew two well-known apothecaries of the beginning of the century, Dr. Peregrine of Half Moon-street and Mr. Pennington of Portman-square, who told him that in the influenza epidemic of 1833 he had eight patients all over eighty years of age who all recovered under a generous treatment of turtle soup and champagne. Mr. Richmond gave a fine copy by his hand of Holbein's portrait of Dr. Butts, mentioned by Shakespeare ("'Tis Butts, the king's physician"), to the College of Physicians. The original is at Anthony in Cornwall.

Charles Darwin, Lyell, Owen, Faraday, and Tyndall are among the other men of science who sat to him, and whose splendid reputations have been properly commemorated by his learned and sympathetic brush. In Mr. Richmond the world of art is owning the loss of a great personality.

THE CHIEF INSPECTOR OF FACTORIES.

SIR MATTHEW WHITE RIDLEY has made an excellent selection in appointing Dr. Arthur Whitelegge to be the chief inspector of factories in the Home Office. Dr. Whitelegge has done admirable service to the public as medical officer of health of Nottingham, and later as medical officer of health of the county of the West Riding of Yorkshire and of the Rivers Board. In these offices he has shown that his administrative ability and his statesmanship in guiding the policy of the authorities he serves are of a very exceptional character, and he has for some time been distinctly recognised as qualified for still more responsible duties if such could be found. The office which he has now accepted has not previously been held by a medical man, and we may therefore assume that the Home Secretary in making this appointment has been less influenced by Dr. Whitelegge's high professional qualifications than by the reputation he has won as an administrator. We think none the less that the varied knowledge which the Home Secretary will in future have at his service will prove of the utmost value in the Factory Department, and while we cannot but regret Dr. Whitelegge's separation from his past work we recognise the great gain to the public which will result from this appointment.

THE ROYAL MEDICAL SOCIETY OF EDINBURGH.

THIS dinner, given annually by the presidents, was held in the Royal Hotel, Edinburgh, on March 13th. The company numbered about sixty. Dr. Joseph E. Bowes, the senior President, occupied the chair, and the croupiers were his colleagues, Dr. W. Macrae Taylor, Dr. Kenneth Maclean, and Dr. Henry J. F. Simson. The usual loyal and patriotic toasts in honour of "The Queen," "Prince and Princess of Wales and Royal Family," "Army, Navy, and Reserve Forces," were proposed by the Senior President. Surgeon-Captain Watson replied for the army and Dr. Beatson for the reserves. The Senior President then proposed the health of their guest, Mr. Watson Cheyne, referring to his eminence as a surgeon and bacteriologist. Mr. Watson Cheyne thanked the society for the high honour they had done him, and said that it gave him great pleasure to revisit his old friends and *alma mater*. He was almost tempted to wish himself a student again when he considered the many advantages now offered; but from another point of view he was glad he was not, for the amount of work now demanded of the student of medicine was something appalling. He proposed "The Royal Medical Society." Dr. Macrae Taylor replied, referring to its present prosperity. Mr. James Robertson Young, honorary treasurer of the society, who had been connected with it for about half a century, was then presented with a handsome silver bowl 11½ inches in height, 14 inches in diameter, and weighing about 90 ounces, a gift from the fellows and members in recognition of his valuable services. The presentation was made by Professor Simpson, who referred to the good work done by Mr. Young not only for the society, but also for the laity generally, especially in connexion with the Merchant Company's Schools. Mr. Young, in conveying his thanks to the fellows and members of the society who from far and near had united to confer this high honour on him, expressed his gratification that so many of them were now eminent in their profession. He related incidents in the history of the society's finances and congratulated it on its present flourishing condition. He also thanked them on behalf of his wife for the handsome gold bracelet which they had presented to her. The toast of "The University" was then proposed by Dr. Macrae Taylor and responded to by Professor Greenfield. Dr. Maclean gave "The Medical Corporations." Dr. Batty Tuke replied for the Royal College of Physicians of Edinburgh and Professor Chiene for the Royal College of Surgeons of Edinburgh. Dr. Henry Simson then proposed the health of "Old Members." This was responded to by Professor Crum Brown, who gave some amusing reminiscences of his connexion with the society; also by Professor Rutherford, who, however, cut short his speech with the remark that he had better sing a song instead. Songs were also contributed by Mr. Watson Cheyne, Dr. Bowes, and Dr. Simson.

THE Bill relating to the publication of indecent evidence which was this week read a second time in the House of Lords is one of great interest to the profession in general and perhaps, we may add, to medical journalists in particular. Unfortunately owing to the great pressure on our columns this week we are obliged to postpone until next week publication of an article on the subject which is already in type.

IN view of the liberal response which is being made to their public appeal in connexion with the festival dinner, at which the Prince of Wales has consented to preside, the Governors of Guy's Hospital have appointed a special investment committee to deal promptly with all sums received towards the re-endowment fund.

LORD BALFOUR OF BURLEIGH has appointed Thomas Richard Fraser, M.D. Edin., Professor of Materia Medica in the University of Edinburgh, to be medical adviser to the Prison Commissioners, in succession to Sir Douglas Maclagan, resigned.

THE Queen has sanctioned the naming of a new block of houses in extension of the Royal National Hospital for Consumption at Ventnor "In memory of H.R.H. Colonel Prince Henry of Battenberg, K.G., Governor of the Isle of Wight."

WE regret to learn that Professor Vulliet, President-elect of the International Congress of Gynæcology and Obstetrics to be held at Geneva in September next, died last week.

WE are glad to know that Mr. Mackellar has recovered from his recent severe illness, and has resumed his duty as chief surgeon of the metropolitan police.

THE subscriptions received by the various funds which have been engaged in raising a testimonial to Mr. W. G. Grace now amount to the grand total of £9000.

THIS year the annual congress of the British Institute of Public Health will be held in Glasgow from July 23rd to July 28th.

FOOTBALL CASUALTIES.—On the 14th inst., at Petersfield, in a match between the Petersfield and Havant teams, a player sustained a compound fracture just below the knee.—On the 21st inst., during a match at Leicester between the Leicester and Nuneaton Clubs, a player fractured his leg and was taken to the Infirmary.—On the same day, in a match between the Leeds Parish Church and Mytholmroyd teams, played on the Mytholmroyd ground one of the home forwards fractured his clavicle. In the progress of a match at Dungannon, county Tyrone, between the Derry and Bessbrook teams a player injured his neck, but notwithstanding medical assistance paralysis supervened and no hope of his recovery is entertained.

REPORT OF

THE LANCET

Special Sanitary Commission

ON

PRIVATE ACTION IN RESPECT OF COMMON LODGING HOUSES.

No. II.[1]

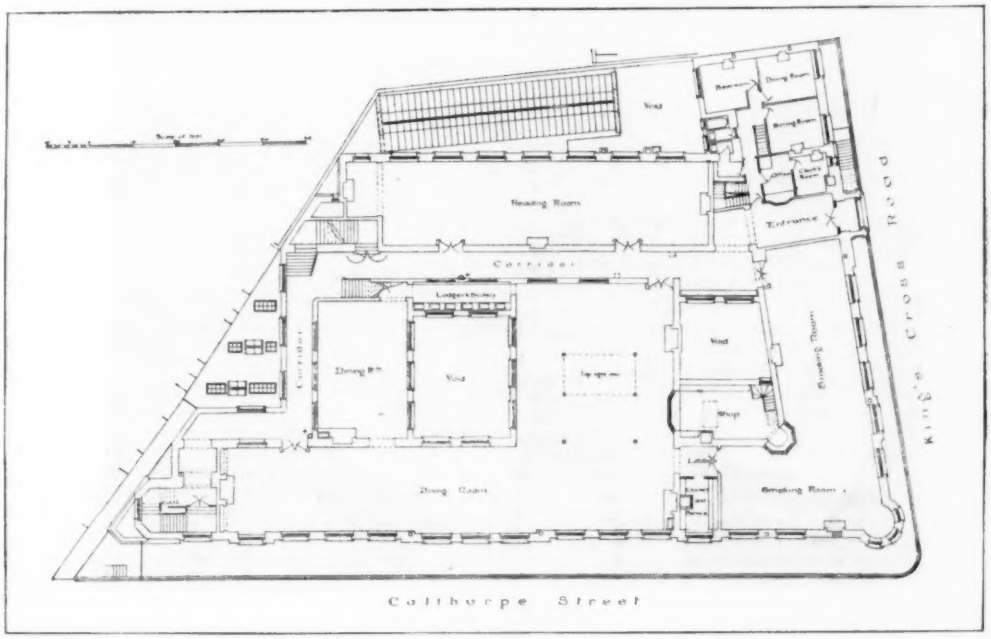
ROWTON HOUSE, KING'S-CROSS-ROAD.

To Lord Rowton belongs the honour of being the first to supply a real need in the lives of single men of the poorer working classes in London — a cheap and comfortable home. We say home advisedly, for if we eliminate the factor of mixed family life—not by any means an unimportant one—Rowton Houses, of which there are now two, really provide all that is implied by that word so dear to the heart of every true Englishman—"Home." The charge at these houses, 6*d*. per night, is a trifle higher than that charged at the cheapest of common lodging-houses, but the standard of comfort is so excellent that, all things considered, Rowton Houses may be said to be the cheapest and best. For the sum mentioned a comfortable bed, a private locker, lavatory accommodation, and the use of dining-, smoking-, and reading-rooms, as well as utensils for cooking and preparing food, can be obtained, and the conveniences are such as cannot generally be obtained in private houses of the poorer class. The first Rowton House, of which we have previously given a description, was a preliminary experiment undertaken by Lord Rowton and carried out under the able direction of Mr. R. E. Farrant, director of the Artisans', Labourers', and General Dwellings Company. This experiment proved so successful that it was decided to build another house, and the present building, which was commenced in August, 1894, was opened to lodgers on Saturday, Feb. 1st, 1896.

Rowton House, King's-cross-road, has been erected upon a site at the eastern end of Calthorpe-street at its junction with King's-cross-road from plans prepared by the architect, Mr. Harry B. Measures. This position is the centre of a largely populated working-class district, and is but a short distance from the main thoroughfares of Pentonville-road, Euston-road, City-road, Hampstead-road, Tottenham-court-road, Oxford-street, and Holborn. The termini and goods-yards of the Great Northern, Midland, and London and North-Western Railways, as well as the Corporation Markets in Farringdon-road, are also within easy walking distance.

The site has a frontage of 200 ft. to Calthorpe-street and 125 ft. to King's-cross-road, with a superficial area of 17,180 ft., and is surrounded on these frontages by an area, from the building to the forecourt line, 8 ft. wide in Calthorpe-street and 4 ft. wide in King's-cross-road, for the access of light to the basement of the building, the floor of which is at a depth, below the paving, varying from 16 ft. at the western end of site in Calthorpe-street, to 8 ft. at the northern end in King's-cross-road. Externally the elevations are in pressed Leicester facing bricks, relieved with pink Fletton bricks, with red and pink terra-cotta for the various architectural features. The roof showing on the front elevations is of green slates, nailed direct upon coke breeze fireproof slabs, carried upon steel construction, the roofing, which does not show on these elevations, being flat, and of coke breeze and steel construction, covered with three-quarters of an inch of asphalt. The interior walling, except where glazed bricks are used, and the exterior walls to the courtyards above the ground floor ceiling level have been executed in Fletton bricks, the walls of the courtyards from basement level up to

FIG. 1.



Plan of Ground Floor.

[1] No. I appeared in THE LANCET, April 29th, 1893.

first-floor ceiling being executed in ivory-white glazed brickwork. All the brickwork of the building has been built in Portland cement mortar.

ADMINISTRATION.

Three years' experience in managing the Vauxhall House has naturally tended to facilitate and improve the administrative internal working of the institution, and the present building has been so constructed that this work may be carried out with a still greater degree of perfection. As will be seen by reference to the ground-floor plan (Fig. 1) there is no communication between the lodgers' rooms and the rooms of the working staff except by passing the clerks' office at the entrance on the ground floor. It will be readily understood that this is of great importance considering the mixed class of men who have to be dealt with. Access to the cubicles for the bedmakers is gained by a staircase in this portion of the building and the cubicles are closed to lodgers after 9 A.M. by iron gates on the ground floor. The administrative section comprises the superintendent's apartments and accommodation during the day for thirteen bedmakers. The catering section, part of which is situated in the basement, includes sleeping accommodation for females employed in the kitchen, &c., and is also isolated from the lodgers' rooms. The superintendent is provided with a self-contained two-storey residence comprising two sitting-rooms, two bedrooms, bath-room, w.c., kitchen, and cellarage. The clerk in charge of the turnstiles is provided with a bedroom opening out of the office with separate w.c. and lavatory for his own use. There is also a sitting-room and three bedrooms for those employed in the catering department.

LODGERS' ACCOMMODATION.

On passing through the entrance in the King's-cross-road (see Plan, Fig. 1) we leave the superintendent's apartments and offices on the right and enter an L-shaped corridor which separates the dining-rooms from the reading-room. At the junction of this corridor with its shorter length is a flight of steps. These lead to the roof of the ground floor, which has in part been laid out as a lounge, forming a pleasantly cool *al fresco* retreat in the summer for the lodgers. Over these stairs is a skylight, which can be opened for ventilation. This corridor, the extent of which will be seen from the plan, is fitted with oak seats and is used by the lodgers as a promenade. Drinking-water is laid on in two places, marked in the plan by a cross.

Dining-rooms.—The two dining-rooms cover a space of 4000 square feet, with seating accommodation for 376 men. This accommodation can be increased if necessary. The walls are built as high as the dado in cream and chocolate tinted glazed brickwork, with terra-cotta tinted plastering above. The tables and seats are in teak, with cast-iron standards, and have been adopted by Lord Rowton and Mr. Farrant after much thought and experiment with regard to the comfort of the lodgers.

Smoking-room.—The floor space of the smoking-room (Fig. 2) covers an area of 1600 square feet, and there are tables and seats for 128 lodgers, and two large fireplaces with open fires and glazed faience mantles and overmantles.

FIG. 2.

Smoking Room.

Reading-room.—The reading-room (Fig. 3) is placed at the side of the building away from the noise of the street traffic, and has a superficial area of 1540 ft. The seating accommodation at tables is for 104 men. There are three fireplaces. Bookcases filled with English classical and lighter literature are at the disposal of the lodgers, and magazines and newspapers are freely provided.

Careful thought is here shown by the provision of a large number of easy and other wooden chairs, some of which, for the benefit of the rheumatic and feeble, are placed around a fire in a recess at one end of the room. This Lord Rowton has christened his "Cosy Corner," which, indeed, it is. The walls of these two rooms are finished in a fashion similar to that of those in the dining-room. Pictures and prints decorate the walls, which have been otherwise adorned with some of Lord Rowton's trophies of the chase—namely, three fine

stag's heads. One is placed in the reading-room and two are in the smoking-room, a magnificent "Royal" occupying a prominent place.

Preparation of food.—The preparation and cooking of food by the lodgers necessarily entails a great deal of extra work for the staff, but the directors have provided every possible convenience for those who prefer to cook their own food. The dining-rooms are provided with four large cooking ranges with ovens, hot plates, and grills, and attached to two of these ranges are boilers to enable the lodgers to obtain hot water. Cooking utensils, teapots, crockery, knives, forks, &c., are also freely provided. In the Vauxhall House it was found that the lodgers in preparing their food littered the place with refuse. In the new house this has been obviated by the addition to the dining-rooms of a lodgers' scullery (Fig. 7). It is fitted with six white enamelled fire-clay sinks with hot and cold water and teak draining-boards. Sanitary pails for refuse are provided to each sink. The room is conveniently situated between the two dining-rooms, and the lodger here finds all the necessary accommodation for preparing his food. But although no pains have been spared to administer to the needs of the tenants in this way, Lord Rowton is not an advocate of the lodgers preparing and cooking their own food, nor, indeed, is it necessary, for excellent food of almost every description well cooked is provided at the smallest possible cost. Uncooked food and tinned provisions can also be obtained at the shop, which is so planned that the serving windows at each end open into the dining- and smoking-rooms respectively. A lift connects the shop with the scullery in the basement. The scullery is 13 feet 6 inches by 18 feet 6 inches, and the kitchen is 19 feet by 27 feet. Both are built in ivory-glazed brickwork from floor to ceiling. The floor of the kitchen is in solid wood blocks. A larder and service lobby adjoin. Everything is arranged with a view to the utmost cleanliness, and at the time of our visits cleanliness and good order were much in evidence. The light is good and the absence of odour on all our visits speaks well for the ventilation.

Light and ventilation.—Before passing on to the sleeping accommodation it will be well to say a word regarding the lighting and ventilating of the day rooms. The ventilation would seem to be efficient. The semicircular top of each window is made to drop forward, as is shown in the illustration of the lodgers' scullery. The tops of the entrance doors are ventilated in the same way; ventilators are placed in the walls and the windows opening into the space marked "void" (see Ground Floor Plan) enables a good cross ventilation to be obtained. However excellent the means of obtaining pure air may be they must be abortive if not under intelligent control, and this it is impossible to obtain among the class who frequent lodging-houses. In one of the dining-rooms there is a top light under the control of the attendants, but this does not apply to the other rooms, and there is, therefore, a danger of the air becoming vitiated. One thing worthy of remark is, that on the occasion of one of our visits while the windows in the dining-rooms and smoking-room were generally closed, those in the reading-room were mostly open, and the variation of temperature was very marked. It is very noticeable that the reading-room is the rendezvous of the more select members of the little community, and it would thus seem that they possess a more intelligent knowledge of the value of ventilation than the rougher section. Having regard to the pollution of the air which must result from the ordinary method of gaslighting, it is somewhat surprising that this form of illumination should have been used. It is true that the parish in which the building is situated has not yet adopted electricity for illuminating purposes,[2] but as it is in use by the Government buildings opposite no difficulty should have been experienced in supplying Rowton House with the electric light.

FIG. 3.

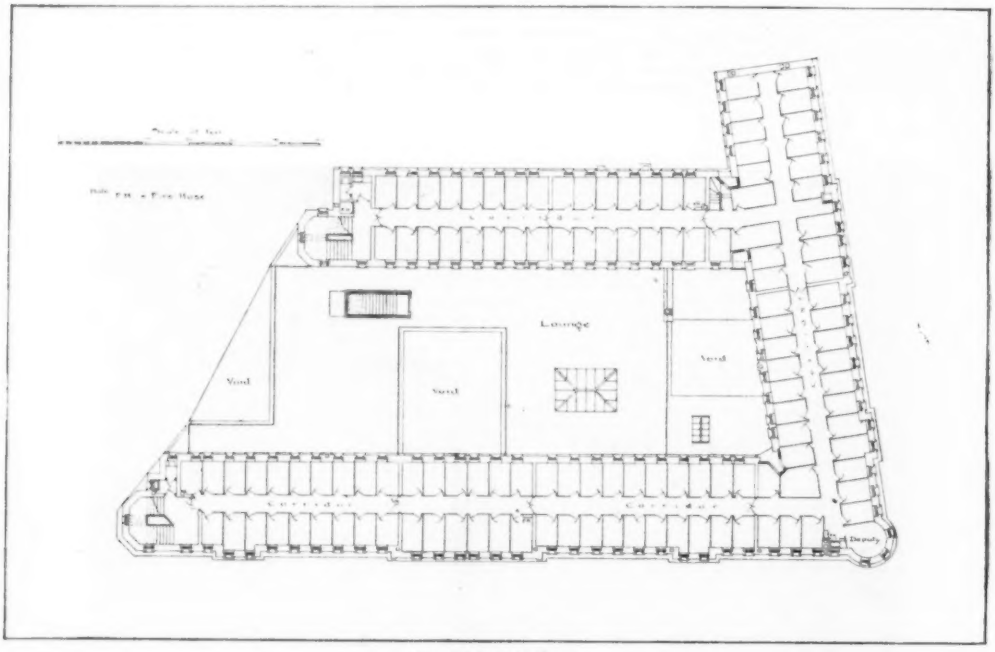
Reading Room.

[2] This reproach, we understand, is about to be removed.

THE CUBICLES.

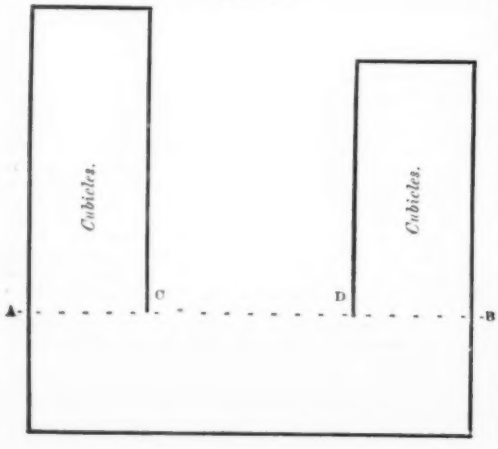
The plan showing the first floor of cubicles (Fig. 4) will readily convey to the reader an idea of the way in which the lodger's sleeping accommodation has been arranged. Along three sides of the building runs a continuous corridor and on either side of this gangway, which is 4 ft. wide, are placed the cubicles. It will be seen from the plan that at certain points the line of cubicles is broken and a door placed across the corridor. This is an important detail, inasmuch as the arrangement enables a particular block of cubicles to be isolated from the rest in the event of a case of infectious disease occurring. Should this happen the patient is at once removed and the section closed until it has been thoroughly disinfected. The division of the cubicles into sections would also serve a useful purpose in the case of fire, as the closing of the doors would stop a through draught and tend to check the spread of the flames. The construction of each separate cubicle (Fig. 6), is worthy of notice. Each lodger is provided with what is really a small bedroom. These bedrooms, or cubicles as they are called, vary in size, but the minimum is 5 feet by 7 feet 6 inches, giving an area of 37 square feet 6 square inches. The separating partitions are 7 feet 6 inches in height and the partition dividing the cubicle from the corridor is 6 feet 6 inches in height, leaving a space free up to the ceiling of 1 foot 6 inches at the sides of the cubicles and of 2 feet 6 inches over the door. There are in all 677 sleeping apartments arranged on six floors. With the exception of the top floor there are 126 cubicles on each storey, with one less on the first floor. Excluding the top floor, the total floor space of each storey is 6221 square feet, giving a cubic space of 55,989 cubic feet, or an average of about 444 cubic feet per lodger. In the case of the top floor of cubicles the air space is somewhat larger. In our notice of the first Rowton House we called attention to the insufficiency of light and air in the cubicles occupying the corners of the building. This complaint cannot now be made, as each cubicle has a separate window affording adequate means of ventilation, always providing that the means are taken advantage of.

FIG. 4.



Plan of Cubicle Floor.

FIG. 5.



One of the easiest and most useful ways of ventilating a room by means of the windows is to raise the bottom sash frame three or four inches and fill the intervening space between the window frame and the lower rail of the bottom sash with a piece of wood. This raises the top rail of the lower sash above the bottom rail of the upper sash and allows air to enter the room in an upward direction from the middle of the window between the two sashes. In the present instance the piece of wood is fixed to the bottom sash rail and a cavity made in the window frame for its reception. In the morning when the lodgers have vacated their cubicles the windows of the cubicles on either side of the corridor can be opened and the apartments thoroughly aired by the cross ventilation thus obtained.

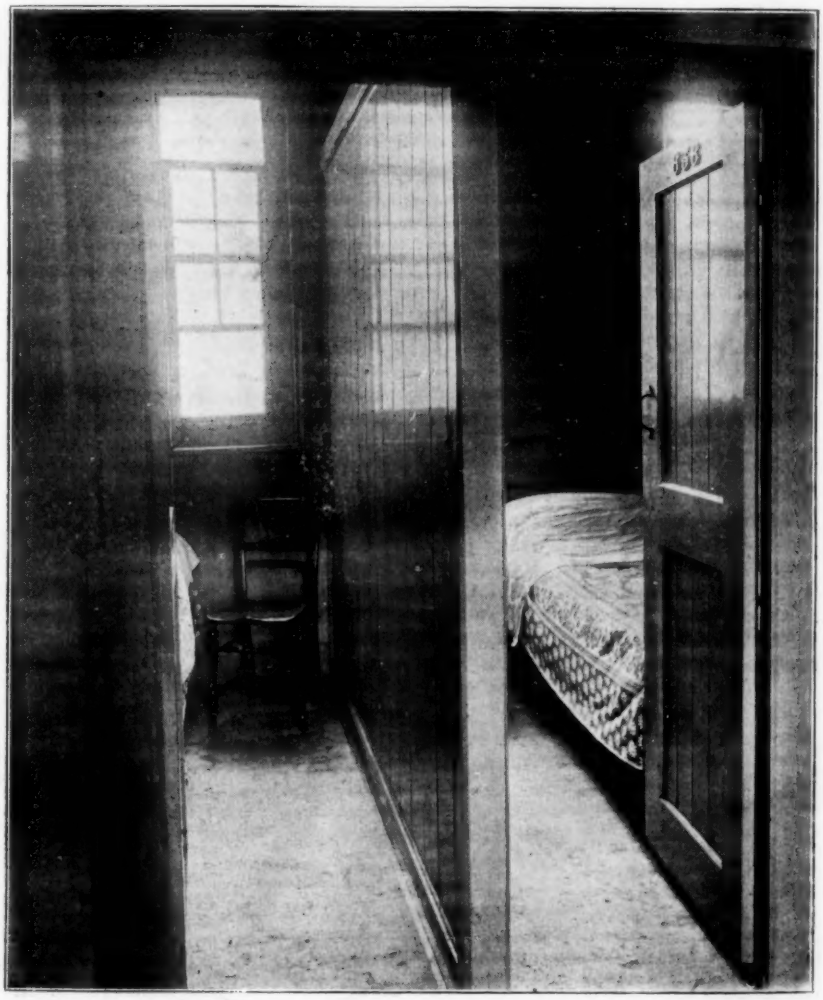
The bedsteads, which are of iron, are fitted with wire-woven mattresses, and are 2 feet 6 inches wide and 6 feet 3 inches long, so that even a very tall man can lie with comfort. Sheets, quilts, and blankets are provided with each bed, which is "made" by placing a blanket between the lower sheet and the mattress. "Few people

know the warmth and comfort to be derived by this plan," said Lord Rowton to our representative, and the remark is worthy of record, inasmuch as it shows, as does also the extra length of the beds, the care and thought which Lord Rowton has for his poor tenants. In each cubicle there is a chair, shelf, and clothes-rail.

The plan of warming the corridors in the Vauxhall House by hot-water pipes running along the tops of the cubicles has been discarded, as it was found that they seldom or never required to be used, but each tenant can practically have as many blankets as he likes to cover him, and as he is quite free from draughts this method of obtaining warmth offers some advantages. The arrangements, under the control of the attendants (two of whom sleep on each floor), for ventilation are good. Two w.c.'s and a sink with a tap above for cold water are placed on the landings outside the entrance to the cubicle corridors for night use.

The cubicles are approached by two fireproof staircases, built in ivory-glazed brickwork, situated at the extreme western boundaries of the building and opening to the ground-floor corridor. As the cubicle corridors run from staircase to staircase, in the event of fire and of one of the staircases being blocked this arrangement forms a practically safe means of retreat. These staircases, which show a marked improvement over those of the Vauxhall House, are well lighted and ventilated by circular windows, and should form a valuable air shaft. The diagram (Fig. 5), which is drawn to scale, shows a cross section of the building. The dotted line A C D B represents a section of the ground floor and C D a section of the lounge previously referred to. It will thus be seen that the air can circulate round the cubicle blocks and that ample light can penetrate each cubicle.

FIG. 6.



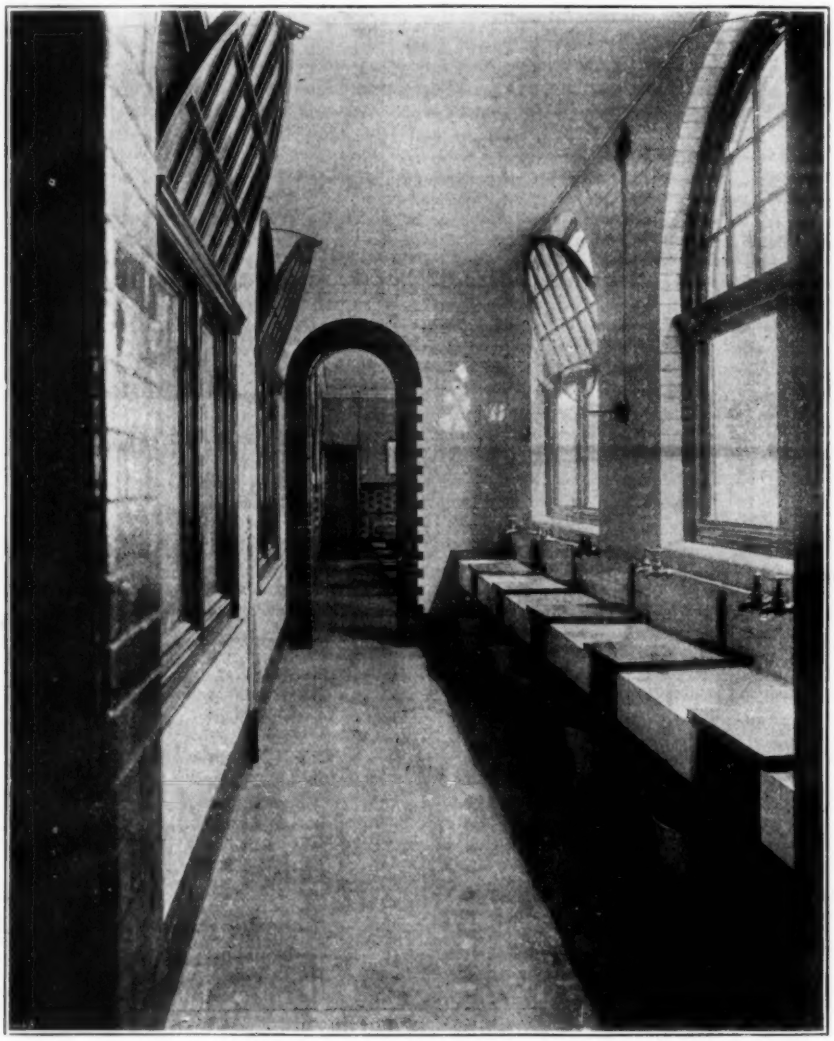
Two Cubicles.

AUXILIARY ACCOMMODATION.

So far we have described the arrangements for shelter, warmth, and sleeping, but a common lodging house has to provide for its inmates certain auxiliary accommodation; and in the present building this has been done with the most intelligent regard for the welfare and comfort of the lodgers.

Many may unfortunately possess only one set of under garments and it is necessary that they should be able to wash their limited linen in a warm apartment. This is provided in the lodgers' washhouse, situated in the basement, an illustration of which we give (Fig. 8). There are twelve washing troughs fitted with hot and cold water and there is also a wringing machine. In the centre of the apartment will be noticed a large heating stove. This is surrounded by a galvanised wire framework for the speedy drying of clothes, and as the stove is enclosed there is practically no danger of the articles that are drying catching fire through carelessness on the part of the lodgers. In the basement will also be found a barber's shop, a repairing tailor, and a shoemaker. For the convenience of those who wish to change their clothes during the time that the cubicles are closed four extra rooms are provided. A reference to the basement plan (Fig. 9) will show the position of these rooms as well as that of the lavatories and urinals. The lavatories are a model of what public lavatories should be—well lighted, well ventilated, and well drained. In construction they are similar to those illustrated and described in our previous Commission. The space apportioned to them in this instance is 36 feet by 56 feet. The room is built in glazed brickwork and there are eighty white enamelled fireclay basins provided with a hot and cold water supply. The large jack towels are changed each day. The waste water is discharged in a channel in the floor and the flooring has a fall to this channel. The lavatories are warmed by the radiant heat from the hot water pipes. A section of the lavatory 7 feet wide by 36 feet long is divided off to form a feet-washing room, fitted with twelve troughs with hot and cold water. These are also similar to those described and illustrated in our last Commission. For the sum of 1*d*. between the hours of 6 A.M. and 10 P.M. a hot or cold bath with towel and soap can be had, and the arrangements are in every respect commendable. The w.c.'s

FIG. 7.



Lodgers' Scullery.

and urinals have wisely been placed outside the building and cut off from it by means of a cross ventilated lobby. Throughout the work has been constructed in white glazed brickwork. Here, in a building with glazed roof, ventilated louvre windows, are placed thirty-four w.c.'s, each fitted with an "Acme" water waste preventer and a Doulton's pan and trap bedded in solid concrete up to the underside of the seat, which is in teak. There are fourteen urinals with semicircular white glazed backs, with double bullnose white glazed screen piers in front and above, and automatic flushing apparatus. Inlets for fresh air are formed along the entire length of the room at skirting level, and exhaust window openings extend with the necessary piers along the opposite wall for its latrine length. A surprise visit paid on a Saturday night found the latrine accommodation in the best of conditions, with absence of smell and perfect cleanliness.

An inspection of the drainage plan (Fig. 10) will show that the planning of the work bears evidence of care and thought. Inspection man-holes have been placed at every change of direction of underground pipes and at all junctions. Wherever it has been necessary to carry pipes under the building interior coated-iron piping has been used. An important point is the dividing of the drainage into sections and the ample provision of fresh air inlets and foul air exhausts to each section.

SUPPLEMENTARY DETAILS OF MANAGEMENT.

With regard to the provision in case of an outbreak of fire mains and hose-pipes are provided at five points on each floor. The floors throughout the building are fireproof, being formed of coke-breeze and steel, and the staircases are in cement concrete. To avoid a cavity between the surface of the concrete and the flooring on the cubicle floors the boards are nailed directly upon the concrete, and the solid oak-block floors in other parts of the building are embedded on the concrete. The system of gas-lighting which has been adopted gives the official on each floor of the cubicles the control of the gas upon that floor; the various rooms in the basement and on the ground floors are controlled separately one from another, and the superintendent has complete control from the office on the ground floor over all the various sections.

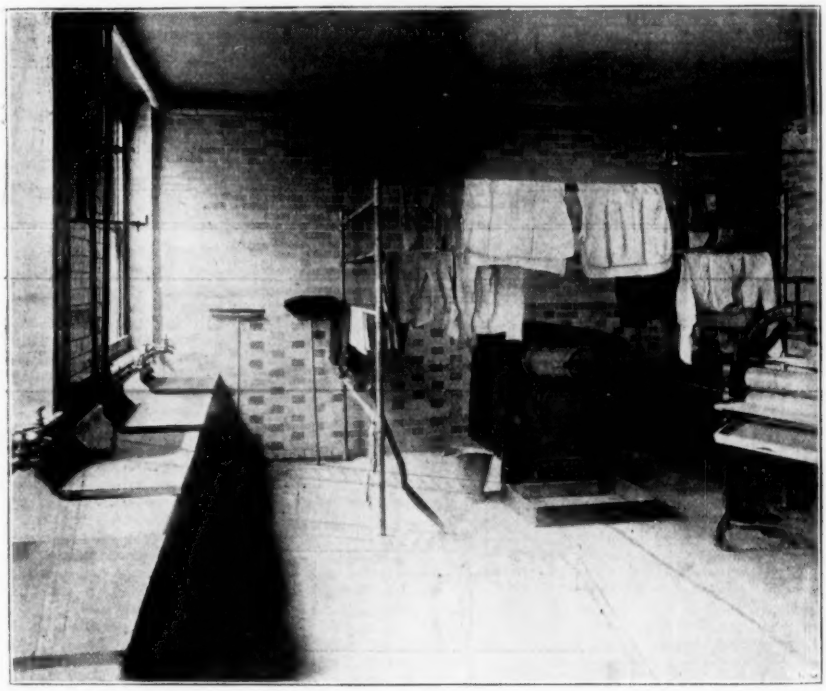
Next to the w.c.'s in the basement and outside the main building is a fumigating room and a mattress-drying room. A ventilated room has also been built for the reception of portable dustbins, with an approach which enables the dustmen to remove the refuse without entering the building. The dustbins are emptied three times a week.

In the basement is a room built in ivory-glazed brickwork for the reception of soiled linen, &c., and for the sorting and delivery of clean linen in its place. A lift built in glazed brickwork runs from this room to the top of the building, with iron-cased doors opening on each floor of the cubicles. Close to this room is another fitted up with open racks for the storage of sheets, blankets, coverlets, &c. Two large cylinders containing 500 gallons of boiling water supplying lavatories are placed in this room in order that the bed linen, &c., may be thoroughly aired.

One point in the management we feel constrained to adversely criticise—that is, the arrangements for transporting the bed linen to and from the cubicles. The same lift that brings the soiled linen to the basement carries the clean linen up to the cubicles. In this there is obviously the risk of infection, and this risk is increased by the fact that the sorting of clean linen and the reception of soiled linen are carried out in the room in which the lift terminates. We have pointed this out to the management, and we understand that in a new lodging house which is in course of construction at Newington Butts the soiled—and clean—linen rooms are to be separated. This will, however, but little minimise the risk, as but one lift will be used. The plea for the use of one lift only is economy of space, but surely some plan might be adopted to prevent what might possibly prove a potent source of infection.

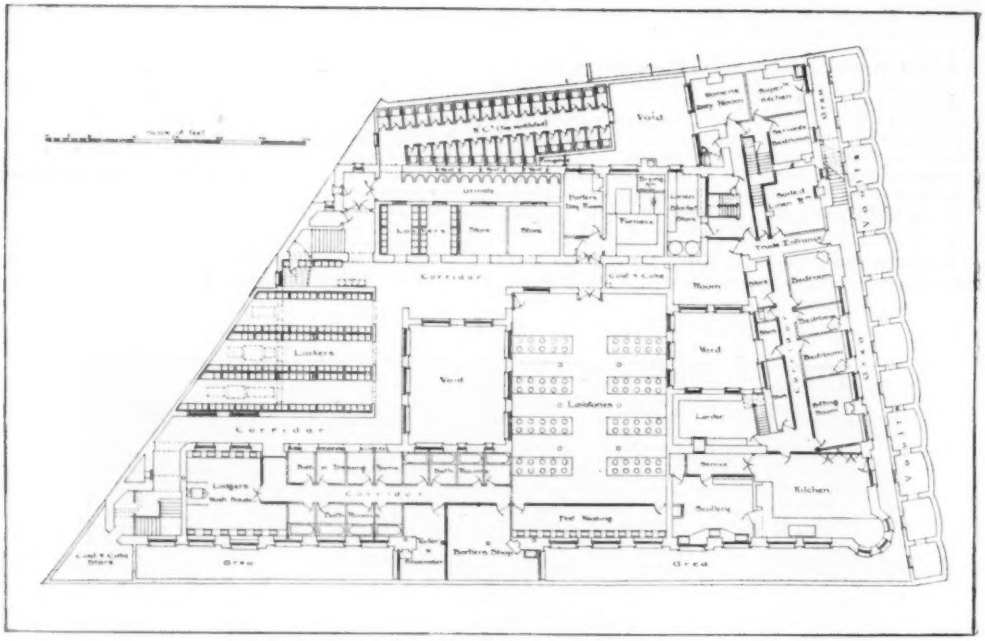
The aim of Lord Rowton has been to meet for the class of

FIG. 8.



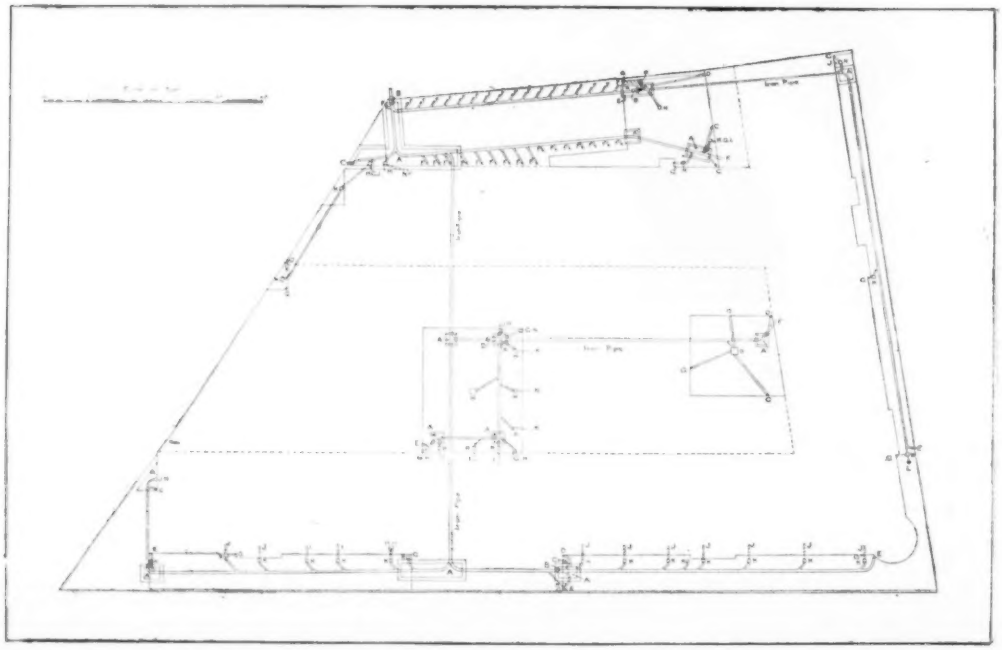
Lodgers' Wash-house.

FIG. 9.



Basement Plan.

FIG. 10.



Plan of Drainage. A, Inspection chamber. B, Syphon tap. C, Soil pipe. D, Exhaust ventilator. E, Fresh air inlet. F, Basement W.C's. G, Rain-water pipe. H, Surface gully. I, Bath waste. J, Sink waste. K, End of channel for lavatory waste. L, Cleaning socket. M and N, Gully and Channel from urinals.

TO ILLUSTRATE THE ARTICLE ON THE NEW PHOTOGRAPHY.

lodgers for whom he caters the real and legitimate requirements of life and to increase their sense of decency. With this object Rowton Houses have been built, and we think the venture has been successful from all points of view whether sanitary, moral, or financial. With the sanitary aspect we have already dealt. The moral influence of the work does not come strictly within our province, but it must be conceded that the inducements to cleanliness which are found in these lodging-houses cannot but be potent for good. From a financial point of view the venture must be pronounced a decided success. Rowton House, Vauxhall, is practically full all the year round, and the present building three weeks after the opening was full to overflowing, numbers being turned away each night. Originally built as a private enterprise by Lord Rowton the buildings are now owned by a company paying a dividend of 4 per cent.

In conclusion, while congratulating Lord Rowton on his success in the case of male lodgers, we would earnestly ask him whether some similar provision could not be made for the corresponding class of females. We appreciate the difficulties, but the need is urgent, and we hope that the good work may be extended in this direction.

THE NEW PHOTOGRAPHY.

WE present our readers to-day with a reproduction from the photograph of the dead monkey mentioned last week. Apart from the fact of its being possible to photograph the spinal column through the thickness of the body the plate shows very well the difference between a biliary and a uric acid calculus in their permeability to Roentgen's rays. The biliary calculus was inserted into the left kidney, and it will be observed that it is hardly to be differentiated from the kidney substance. The uric acid calculus, on the other hand, which was placed in the right kidney, comes out perfectly clearly, being much less permeable to the rays than the biliary calculus. Of course, our experiment is not nearly enough to ground a

FIG. 1.

solid proposition upon, but it would seem to show that it will be more difficult to locate a gall-stone or diagnose between it and malignant disease of the gall-bladder than to localise a calculus in the kidney. These two photographs were taken with a Newton's bulb. The two remaining figures are of cases of lost needles.

Fig. 1 is a case reported by Mr. R. G. Hogarth, senior resident medical officer, General Hospital, Nottingham. A young woman presented herself at the hospital complaining of pain along the inner side of the metacarpal bone of the ring finger. There was some slight fulness on the dorsal surface. She stated that ten weeks previously she had run a needle into her hand while washing the floor; it entered on the palm opposite the base of the fifth metacarpal bone. Chloroform was given and an incision made over the painful part and nothing was found. The search was not prolonged as the patient had been in the hospital several times before and he had some doubt whether a needle was there or not, and was anxious to try the rays. Mr. Simpson, F.R.M.S., senior physical demonstrator, University College, Nottingham, kindly offered to take a photograph of the hand, which was done, and the needle was discovered lying parallel to and along the inner side of the metacarpal bone of the ring-finger. Its position made it very difficult to feel

FIG. 2.

and also, he believes, to demonstrate in the photograph. Next day it was removed. The conditions under which the photograph was taken were as follows. A five-inch spark induction coil was driven to give a two-inch spark, and one of Messrs. Newton's "focus tubes" was used with Ilford extra rapid plate under a thin plate of vulcanite fibre. The exposure was two-and-a-half minutes at six inches distance. The position of the needle is so faintly shown in the negative that the process block would not reproduce it, therefore it has been retouched, which makes it more distinct.

Fig. 2 was supplied to us by Dr. Chas. B. B. Savory (Surgeon to the Haverfordwest and County Infirmary), who says: "The print is a photograph of a patient's right hand, taken by the new method of photography, showing a needle which for the past eighteen months has defied all efforts to localise. The photograph is the work of Mr. Ernest Baugh of this town, whom I feel I must take this opportunity of thanking for his great care in producing the same. I think the unusually clear definition is a sufficient justification for my sending it to you. The needle was removed by drawing a line between two points, the line intersecting the needle at right angles. About half an inch below the surface of the skin of the wrist the blade of the scalpel impinged upon the needle, which was removed without difficulty. It proved to be about three-quarters of the length of the needle, the eye having entered the wrist first. If I may be allowed to make the suggestion, it is a point of practical importance in this new method that the perfection of the definition depends more upon the different *densities* of the parts rather than upon the *thinness* or *thickness* of the parts which the rays traverse."

Dr. Mackenzie Davidson of Aberdeen reports to us that he has obtained a photograph of the cranial cavity showing the position of a bullet clearly, also a photograph of the hip-joint showing a fracture of the neck of the femur.

DIRECT VISION BY MEANS OF ROENTGEN'S RAYS.

(Description of a Binocular Cryptoscope.)

BY JOHN MACINTYRE, M.B., C.M. GLASG., F.R.S. EDIN.

CONSIDERABLE attention has recently been paid to attempts made to see through objects hitherto considered opaque. The remarks made by Mr. Swinton and the annotation upon the subject in THE LANCET of Feb. 29th have raised some important questions, and as I have been working on similar lines since the introduction of this new art the following notes may be of some little interest.

In the article referred to Mr. Swinton described an instrument consisting of a small pasteboard tube with a black paper covering at one end protecting a screen of barium platino-cyanide; at the other end was an aperture by means of which one could look at the screen when illuminated by means of a Crookes's tube. I had the pleasure of inspecting this by the kindness of Mr. Swinton himself, and was able to see the shadows of certain bodies in front of the screen. The apparatus which I have to describe was thought out some time ago and is founded upon Roentgen's own investigations. This point is worthy of notice because a good deal of misconception still exists on the part of the public about what can be seen and the means by which these shadows may be obtained. In a recent copy of *Nature* one writer says:—"The statements that have appeared to the effect that Signor Salvioni has devised a method of rendering the retina of the human eye sensitive to Roentgen's rays, and that by his method objects are directly seen through planks of wood, sheets of aluminium, &c., are absurd." Of course, one cannot see the objects, but shadows of them; and with regard to the statement of the retina of the human eye being sensitive to the rays, all one can say is that Professor Roentgen discovered the fluorescence of the barium platino-cyanide himself, and in that way, of course, the human eye can see shadows of objects by means of ordinary light. There is no injustice in making this statement because Professor Salvioni in his own paper acknowledges that he has brought out nothing new which could not have been deduced from the original experiments of Roentgen. The novelty, he says, if, indeed, it is so, consists merely in making use of known facts to design the arrangement. Any remarks therefore, which I have to make in this paper are based upon the same lines; in other words, it has been merely a matter of working out Roentgen's original ideas with a view to obtaining the best results.

For my first instrument I took the eye-piece of a Ross microscope, and at the end next the eye screwed in a lens one inch focus suitable for seeing the barium platino-cyanide screen at the other end of the brass tube, which was covered with pasteboard or aluminium. Looking at a Crookes's tube in a high state of fluorescence I could perceive a round illuminated field, and certain bodies could be seen when placed between the screen and the tube, but the instrument was of no great practical value. Afterwards I made a series of experiments, and the first improvement was got by making the tube sufficiently long to give the necessary distance between the eye and the object for clear definition. I have used lenses of various focal distances, and in some instances they have proved advantageous; my best results, however, have been got without lenses at all. The apparatus which I now use consists essentially of two oblong frames with a bellows-camera uniting the two and held together by adjustable brass work. By means of this arrangement antero-posterior distances can be got suitable for direct vision or different lenses. In front there are two brass tubes, by means of which one can look with both eyes towards the screen, and at the back there is a barium platino-cyanide screen, which will be described. The screen is covered in with a sheet of aluminium one-eighth of an inch thick, which can be removed at will and different substances placed in the same position to test the fluorescence and sharpness of image; the eye-tubes in front can be adjusted for width of eyes. The object to be examined is simply placed between the Crookes's tube and the platinum screen. To obtain any measure of success two things are necessary: first, a good screen with some fluorescent substance on it; and, secondly, a Crookes's tube in which the fluorescence is well marked. With regard to the former, my best results have been got with barium platino-cyanide, not spread upon paper, but upon the surface of glass. I tried different substances and many ways of preparing a good screen, but the most efficient in my experience has been produced as follows. A quantity of barium platino-cyanide was rubbed in a mortar until it formed a fine powder, and then mixed with a solution of mucilage until I had a thickish yellow fluid capable of being poured upon the glass, much as one would pour the collodion after the old wet-plate photographic process. This was allowed to dry slowly, and when placed in position gave fairly satisfactory results. I have no doubt with further experience it will be possible to devise something very much better.

Experiment 1.—Some coins were placed in a purse and on looking the shadows of the clasp and coins could be distinctly seen.

Experiment 2.—I placed a book of about 100 pages thick between the instrument and the purse and the objects became more distinct.

Experiment 3.—A book with two thick cardboard covers enclosing 500 leaves was taken and a pair of forceps placed in the centre; the image of the forceps was again perfectly distinct.

Experiment 4.—A pair of scissors was placed inside a half plate mahogany slide and two pieces of mahogany were placed in front and behind it. The antero-posterior measurement was therefore two and a half inches of solid wood and the mahogany slide as well. The shadow of the instrument could be distinctly seen, and an aluminium plate one-eighth of an inch thick made little or no difference.

Experiment 5.—A pair of scissors was placed in the centre of the Medical Directory for 1896—a work which consists of over 1900 pages—and even that was penetrated by the light in question. (It will be noted in all these experiments the objects looked at through the various structures were dense and therefore likely to give good images.)

Experiment 6.—In the sixth experiment I placed my hand in front of the screen and the phalanges and metacarpal bones could be distinctly seen.

Experiment 7.—I placed a thick aluminium plate behind the hand between it and the Crookes's tube, and a much better definition of the bones was obtained.

Experiment 8.—On looking through the boot of one of the gentlemen watching the experiment the shadows of the metatarsal bones and phalanges could be seen.

Experiment 9.—On looking through the hand of a gentleman who had met with an accident some years ago a lead pellet could be seen near the second metacarpal phalangeal joint.

The success of such experiments depends upon good tubes and properly prepared screens; but as I think it necessary in recording or confirming any of Roentgen's experiments that nothing should be stated which might mislead others, I should like to point out that difficulties still stand in the way of a really practical instrument. Many factors must be taken into consideration in experiments like the above, but two at least are of great importance:—firstly, penetration; and, secondly, definition. With regard to the former I feel quite confident that the "x" rays will soon be produced in sufficient degree to pass through the thickest tissues of the body. As far as seeing through different parts are concerned I have obtained penetration through much thicker tissues than above described. With regard to definition I have found the following points to be of advantage. First of all, black paper or thin black cardboard placed behind the barium platino-cyanide screen is not as good as a piece of aluminium. Secondly, I got the best results in a darkened room. Thirdly, the cryptoscope itself should be sufficiently thick in the walls to exclude the possibility of ordinary light getting through. Fourthly, to obtain the best results one must always note the exact distance between the object to be viewed and the barium platino-cyanide screen, because good definition is only got, when the objects are not very dense, by observing the proper relationship between the fluorescent surface, the object itself, and the Crookes's tube. Roughly speaking the nearer the object to the screen the better, but in thicker structures the farther the object is removed from the sensitised surface the farther back must the Crookes's tube be removed.

Since the above was written ten days ago I have prepared a number of screens of different materials, but have fallen

back upon the barium platino-cyanide. Like others I have tried the potassium platino-cyanide salt, and with dense objects particularly it certainly has an advantage over the barium salt. I can now speak with greater confidence than above stated, because with my new instrument I have seen distinctly shadows of the arm, forearm, bones of the wrist, and feet. I have also been able to see a good part of the bones of the lower extremity. Moreover, I have placed some bullets inside a skull and had no difficulty in obtaining distinct shadows of them on looking through the vault of the cranium. The bones of the head are easily penetrated, and I have arranged a special apparatus for looking into the bones of the face, a proceeding which must be of great importance in examination of pathological conditions of the antrum of Highmore. I have also found the cryptoscope of great advantage in determining the exposure and best arrangement of the Crookes's tube for definition, and have now photographed practically the whole of the human skeleton, including the greater part of the spine and ribs through the front of the body, and all the bones and joints of the extremities. The inner wall of the cranium has also been photographed in a dead subject.

Since the above was in type we have received the following from Dr. Macintyre :—

As will be seen from the various newspapers calcium tungstate has been recommended by Mr. Edison. I have since tried a number of screens for the cryptoscope, including calcium tungstate both in its insoluble precipitate form and the crystals prepared by Messrs. Baird and Tatlock. In this new salt we have a good fluorescent substance, but before giving a final opinion upon it I should like to have Mr. Edison's methods of preparing the crystals. There is nothing, however, in his telegram as far as I can gather which I have not demonstrated with other salts. I have seen all that he has referred to by means of a good barium platino-cyanide screen, but I am getting more familiar with the best methods of preparing such and now think the double salt of potassium is better. It seems to me, however, that, just as in ordinary photography it is less important to have a very sensitive plate than a good supply of sunlight, we shall find that in this work a good Crookes's tube is of more importance than an excellent fluorescent screen. For class demonstration I have found a muslin screen saturated with one of the salts of use. By this means shadows of opaque bodies can be demonstrated to an audience.

I have now completed my series of the skeleton in the adult human subject and have taken a photograph of the vertebral column, which shows the cervical and dorsal vertebræ, upper six ribs, their attachments, clavicle, and a good portion of the scapula. This was done straight through the body with one of Newton's tubes and eighteen minutes' exposure. This exposure was the longest of the set, the hip and shoulder next, and the knee the third longest, as might have been expected. Unfortunately, I was using a coil which had to be returned this week and consequently my work has been stopped for a day or two, but I find the interior of the skull can easily be photographed. By carefully adjusting the Crookes's tube the rays can be sent straight through the side of the vault next the tube without its appearing on the negative, but the inner wall of the opposite side of the vault appears showing sutures, grooves for meningeal arteries, and structure of bone.

Although I have been engaged in the general application of Roentgen rays my main work will consist in its application to laryngeal surgery. This includes the examination of the upper part of the chest and the bones of the neck and face. As far as photography is concerned I have been able to photograph the upper part of the chest and the spine above and below the inferior maxilla—a fact which will be of great service, I have no doubt, in the detection of erosions in aneurysm below or cervical caries higher up. Foreign bodies placed in the region of the neck or jaw are easily seen, and I have taken excellent photographs of destruction of bone due to recurrent malignant disease in the upper jaw. My work in studying the effects on cartilage and other tissues in the region of the larynx I hope to place before you shortly. The tissues in the neck are easily penetrated by the "x" rays on examination by the cryptoscope, but definition is what is wanted. The bones of the face are also easily seen through, but I have designed a lamp for illuminating the antral cavities through the mouth. Details of these I hope to place before your readers very soon.

Glasgow.

THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER XIII.

Tyrrell v. Wakley. — The Case for the Defendant. — The Judge's Charge. — Fifty Pounds Damages awarded. — Wakley's Contumacious Behaviour. — The Effect of the Trial.

BROUGHAM'S defence of Wakley in this case was one of his finest forensic efforts. He categorically traversed every statement and implied argument that had fallen from Serjeant Vaughan's lips, and while using every sort of legal weapon in his client's behalf, comported himself with an easy gaiety that betokened the good conscience that is bred of a good case. He absolutely denied that Wakley was animated by any malicious feeling towards Mr. Tyrrell. Censure had been administered by a critic to a work submitted to the public's judgment—that was all. The author's character was not attacked. There was not in Wakley's article one word that constituted a perversion from liberal, free, and unfettered criticism into malignant slander. Next Mr. Brougham pointed out, not without sophistication, but with great ingenuity and eloquence, that Wakley had never been so stupid or ill-advised as to claim any copyright in Sir Astley Cooper's lectures so as to be able to preclude anyone other than himself from publishing them. Wakley only claimed property in his own report, for the transcript and printing of which he had paid. He was not calling Mr. Tyrrell a thief because Mr. Tyrrell had published ten of Sir Astley Cooper's lectures, but because he had used THE LANCET reports of the same without acknowledgment, which reports had appeared with the tacit if not with the express sanction of their eminent author. Upon Mr. Tyrrell's plea, which was really beside the point, that the new and authorised publication had taken place because of the numerous inaccuracies which had crept into THE LANCET reports, Brougham could afford to pour ridicule. For, firstly, the plagiarism that had taken place from THE LANCET for the production of Mr. Tyrrell's book was undeniable, and to transcribe passages from a report must appear a droll way of correcting that report; while, secondly, the statement that THE LANCET reports were incorrect was unsupported by any evidence and was manifestly an after-thought. Brougham's humour was a little unsparing, and while he was dealing with the accusation of plagiary his words were spoken to a running accompaniment of laughter.

"Here again is the incorrect account of THE LANCET!" he said, reading out one of the selected parallel passages. "'Certainly the formation of matter will be attended with a slight fever, but not of the hectic kind; the tongue will be clean, the pulse very little affected, and the person very slightly deranged; but after an opening is made into the part constitutional irritation sometimes comes on and life is then endangered.' A most inaccurate representation of that worthy, learned, and skilful man, Sir Astley Cooper, which he (Sir Astley Cooper) could not bear to read—which haunted him every time he heard the name of THE LANCET—he was punctured every time he heard it. 'So,' says he, 'I will send to Mr. Tyrrell; he is an *accurate* man; he will not publish such trash; I will send for good Mr. Tyrrell, my 'squire in medical knight-errantry, and he will publish what I really did say.' So he sends for Mr. Tyrrell, and he says, 'Mr. Tyrrell, there is sixpence for you, Mr. Tyrrell; go and lay it out in a way that is most calculated to correct the errors of THE LANCET.' And then with this sixpence he (Mr. Tyrrell) goes and purchases a

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI. and XII. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, and 21st respectively.

number of THE LANCET, and tries the remedy of giving a correct account of what Sir Astley Cooper said; and, in order to do that, he gives you the following correct account: 'Certainly the formation of matter will be attended with a slight fever, but not of the hectic kind; the tongue will be clean, the pulse very little affected, and the person very slightly deranged; but after an opening is made into the part constitutional irritation comes on, and life is then endangered.' As much alike as ever two peas were! Indeed, no two peas were so much alike."

From this it will be seen that the pervading element of Brougham's speech was its genial banter. In this way he went through several parallel passages, reading first THE LANCET reports, then imagining Sir Astley Cooper condemning THE LANCET for mis-statements and sending for Mr. Tyrrell and asking him, sixpence in hand, to make the necessary correction. This Mr. Tyrrell was supposed to have done, and the resulting corrected passage was read to the jury. It was always, for practical purposes, unaltered from the form in which THE LANCET had given it and which the Court had just heard.

With the more serious accusation of wilful suppression of the termination of Thomas Denman's or Timothy Desman's case Brougham also dealt in humorous style—a style which he considered very apt to the situation, for he asked how it was possible for THE LANCET to state the ridiculous circumstances to their readers without rallying Mr. Tyrrell on them.

"A man is sent to the hospital," he said, "with a compound fracture of the skull. ... A battle begins, and then comes the skilful and powerful hand of our great champion, Mr. Tyrrell; and he, by the skill of his movements, by his extraordinary perseverance and able tactics, soon brought the thing to a successful issue. He thought he had watched his enemy like a good and skilful commander, and fairly beaten him out of the field. So he thought and said on the 20th of September; but unfortunately death in the end out-generaled him, and obtained the victory two days after the hasty proclamation of the good doctor's triumph. The fact was that while the plaintiff was gazetting his own promotion, while he was indulging in the fond aspirations of his own conquest, while he was making bonfires and letting off gunpowder—in the midst of rejoicings in came death upon his patient, by a sort of lateral movement, opened his trenches, and, notwithstanding the formidable array of hospital weapons, bore away the palm of victory; horse, foot, and dragoons; and left the poor doctors in dismay and discomfiture."

Brougham concluded an eloquent and highly humorous speech by repeating that there was nothing in THE LANCET criticism of Mr. Tyrrell's book that transgressed the legitimate grounds of criticism. The author had come before the public for notice and had been noticed. His private character, his behaviour as a parent or husband, for instance, had not been attacked, but his reputation as an author had been dealt with—and that everyone who affixes his name to a book must expect.

Lord Chief Justice Best summed up in an impartial manner, but the most definite words in his somewhat colourless address directed the jury to find for the plaintiff, and no one reading the libel can be surprised at that. The Lord Chief Justice considered that the phraseology adopted in the libel did convey the very imputation upon Mr. Tyrrell's private character that the defendant disclaimed for them "otherwise he did not know what the language could mean," and it was this expression that gave Mr. Tyrrell his verdict. With regard to the case of Thomas Denman or Timothy Desman—and this was the topic upon which the strongest language was used in the libel complained of—the Lord Chief Justice did not seem to consider that Mr. Tyrrell had been treated very badly. He cavilled a little at the word "imposition," which was Wakley's term for the narration of the case to the public as a success when it was really a failure, and wished that he had had evidence before him that the *erratum* had not been seen by the author of the review. But he considered that strong observations upon the impropriety of narrating such a case to the world as a successful case were warranted and constituted fair criticism; and if that had been all that was to be discovered in the defendant's conduct he should have directed the jury to find a verdict in his favour. But he did not consider the article in question fair criticism as a whole and could not discuss one part of the alleged libel away from the context. He pointed out, however, that the case never should have been published as an illustrative case at all—unless as a warning—by a man who knew of its fatal termination, and he held that an *erratum* did not alter the fact that it was no longer an illustrative case. To put it briefly, Lord Chief Justice Best thought that Mr. Tyrrell had been libelled not so much by the things that had been said of him as by the way in which they had been said. He did not allude to the fact that certain of the copies might have been distributed to the public without the slip of *errata* pasted in them until he was reminded of his omission by Wakley's counsel; and he accepted as accurate Serjeant Vaughan's uncorroborated and utterly untrue statement that THE LANCET reports of Sir Astley Cooper's lectures, being faulty, were corrected by Mr. Tyrrell. He also informed the jury that Sir Astley Cooper objected to the publication of his lectures in THE LANCET, which was not only beside the question at issue, but irreconcilable with Sir Astley Cooper's own words on the subject.

The jury consulted for a quarter of an hour and then returned their verdict for the plaintiff, assessing the damages at £50.

Immediately after the result of the trial Wakley, with characteristic decision, or obstinacy, or audacity—for different people will view the action in different ways—published his opinion of the proceedings and took occasion to recapitulate every word he had uttered previously and for using which he had just been fined. He eulogised Brougham and was complimentary also to Serjeant Vaughan, holding his treatment of the case to have been fair and honourable. He took it for granted that the accusation of inaccuracy against THE LANCET was incorporated in the learned gentleman's brief, but thought that he must have felt ashamed at being expected to make it, knowing that no witnesses were to be called to support his opening words. He also rallied Serjeant Vaughan upon his statement that the publication of medical lectures was especially profitable. "How did he know there was such a profit?" asked Wakley. "If he would commence the publication of the next course of *gratuitous* lectures delivered by his renowned client, Mr. Frederick Tyrrell, we will venture to assert that by doing so for the next seven years he will not obtain sufficient profit to purchase powder for his wig."

But in commenting on the summing up of the Lord Chief Justice Wakley's words became graver and his language more forcible. He virtually charged his lordship with taking up the cudgels in Mr. Tyrrell's behalf against THE LANCET, accusing him, while shielded by his office, of throwing into the scale of the plaintiff's case the preponderating influence of his authority. He found the Lord Chief Justice's words to the jury wrong in two respects. Firstly, it was not pointed out to them that no attempt was made to disprove the defendant's principal charge against the plaintiff—viz., plagiarism. "Did the plaintiff," asked Wakley, "attempt to falsify that charge? Did he place before the jury one tittle of evidence for the purpose of negativing that assertion? No, he did not." Yet this tacit admission of guilt was not pointed out to the jury. Secondly, Wakley held it disgraceful that the assertions that THE LANCET reports were inaccurate and that Sir Astley Cooper was dissatisfied with them should have been made from the bench when no evidence supported either of these assertions, while words

in actual contradiction of them had been put on record in THE LANCET from Sir Astley Cooper's own lips.[2]

Wakley held that even if THE LANCET had strayed from the paths of criticism in the matter of attributing to Mr. Tyrrell motives other than proper (which he still denied) the judge in the case had gone much further beyond the boundaries of his judicial duty by characterising those responsible for the production of THE LANCET as thieves upon the unsupported statement of counsel briefed in the interests of the enemies of THE LANCET. *Wakley then stated definitely that the copy of Mr. Tyrrell's work purchased by the Editor of* THE LANCET *from Mr. Highley on Oct. 5th had no erratum slip re Desman or Denman.* Further, he added that after the action was instituted he went to Mr. Highley's shop and found there several more copies similarly deficient. He concluded the article by tearing Mr. Tyrrell's additions to his eminent uncle's lectures to tatters in a manner that showed the restraining influences of a judge's ill-opinion and a fifty pound fine to be but small, and reviewed the celebrated *erratum* for the first time by pointing out that it was written in shocking grammar—as it was.

The termination of the case of Tyrrell *v.* Wakley marks an epoch in the career both of the defendant and this journal. It was at this time that Wakley the Reformer, with THE LANCET as his weapon, became recognised as a power. Hitherto the bitterness and violent language of some of the articles in THE LANCET, and the astounding liberality of some of the editorial views, had brought to the paper considerable measure of attention, but not of a wholly respectful sort. Some men read it, some men laughed at it, and some men wondered at it, but nobody much marked it, for its views were not sufficiently condensed and its objects not definitely concentrated. But the result of this second law-suit, taken in connexion with the case of Abernethy *v.* Hutchinson, revealed Wakley as the exponent of a sound, settled, and far-reaching policy for medical reform, and from the close of 1825 onwards he had as his intelligent supporters all who could benefit by such reform and as his bitter and wide-awake antagonists all who would lose by the same. For the case of Abernethy *v.* Hutchinson dovetailed well into the case of Tyrrell *v.* Wakley. The one was an entirely impersonal affair. What Wakley and Abernethy thought of one another had no bearing upon the legal question of what measure of exclusive copyright, if any, a man might have in his spoken words as a lecturer. The other was a very personal matter indeed, for Wakley made no secret that his review of Mr. Tyrrell's book was intended to hold up that gentleman to the public as a dunce and a plagiarist. Yet on each occasion Wakley had the same inspiration—the quiddity of each attitude was the desire to curtail the privileges of the hospital surgeons and enlarge those of the rank and file of the profession. In the first case he exhibited the lecturer in his public capacity as a lecturer, and said that the profession at large had a right to read his words that they might judge of the propriety with which he filled a position the emoluments of which came—and came of necessity, not of choice—out of the pockets of the London students. In the second case he exhibited a hospital surgeon as a scientific author and a prominent member of an honourable profession which is fenced about with much traditional etiquette. These posts at the various hospitals and recognised schools attached to them are valuable, said Wakley, because of the fees which they bring and because of the position which they give to their occupants. Let us take this gentleman, then, as a specimen, and see how he discharges his duties towards the profession at large, let us estimate his scientific work, and let us inquire into his views of professional right and wrong. That was the true meaning of the libellous article out of which the lawsuit of Tyrrell *v.* Wakley arose; and the result of that suit was to reveal what had previously seemed to be aimless, if able, fault-finding as part and parcel of a deliberate policy: and Wakley's subsequent actions in the cause of reform of the Royal College of Surgeons of England and within certain of the metropolitan hospitals were but developments of that policy.

And now the persons menaced by him could see this for themselves, and their opposition grew bitterer as they reckoned up the prowess of their foe. In the Abernethy case, where Abernethy was clearly acting as the representative of his colleagues, Wakley had fought them on a purely legal question, and in the end had won the day, while during their brief period of victory he had continued to do the thing against which the aid of the Court had been asked. In the Tyrrell case he had subjected one of their order to scathing and bitter criticism as a professional man and a scientific writer, and had escaped with a fine of but one-fortieth the magnitude at which the damage that he had done had been estimated, and celebrated his escape by deliberately repeating his offence and adding to its enormity. The authorities of the Royal College of Surgeons of England were already indirectly involved in Wakley's denunciation. Their by-law, by which Abernethy and a few others were made the only teachers whose certificates of due attendance by the students at the London hospitals the College would receive, had come in for unfavourable notice, and it did not require much foresight to presage Wakley's speedy return to the attack. The staffs of the various metropolitan hospitals were also in a state of expectation. Certain of their number had been treated cavalierly, and the one man who had sought it had not been able to get any substantial legal redress. On every staff in London there were men who owed their position to other qualifications than their surgical attainments, and these men fell a-wondering whose turn it would be next.

(To be continued.)

[2] Chapter ix, of this Biography, THE LANCET, Feb. 29th, 1896, p. 573.

THE INSANITARY AREAS OF LEEDS.

A LOCAL GOVERNMENT BOARD inquiry has been held at Leeds concerning certain insanitary areas which stand condemned by the reports of the medical officer of health, Dr. J. Spottiswoode Cameron. The main difficulty rests in the fact that there are so many insanitary areas in Leeds. Even if the most extensive schemes now proposed were at once carried out there would still remain many localities where other and equally extensive schemes might with every show of reason be brought forward. Then, as if the large extent of existing evils did not suffice, new houses are constructed in such a manner as to give every promise of sanitary defects when once they have been inhabited for a little while. Apart from the usual complaints of poverty, overcrowding, defective and filthy drains, insufficient ventilation, and air space, Leeds suffers more especially from the great number of back-to-back houses. The disastrous effect on public health of back-to-back houses has been amply demonstrated at Leeds as elsewhere, yet the town council has taken no measure to prevent the building of new back-to-back houses, and dwellings of this description, where through ventilation can never be established, are now in the course of construction. It seems somewhat inconsistent to bring forward a scheme for dealing with certain insanitary areas where the chief defect is due to the great number of back-to-back houses and the want of space if at the same moment the building of more back-to-back houses in other parts of the town is allowed. The purchase and the pulling down of back-to-back houses in one part of the town and the building up of more back-to-back houses in another part of the town is a work worthy of Penelope. But if Penelope undid at night the tapestry work she had done in the daytime

she had a good motive for postponing the termination of her task. What, however, can be the motive of the town council of Leeds in thus renewing the evils of the past? Are they awaiting the return of some Ulysses before they consent to wed themselves to the principles of sanitation? Why postpone the happy event? Why not complete the good work of pulling down old and bad back-to-back houses by refusing to sanction the building of new back-to-back houses, which must in their turn inevitably become old and bad? There is no lack of evidence as to the evil that results from such structures. It was in a group of such houses that an outbreak of typhus fever occurred in 1890. But for the isolation, not only of the patients, but of the other inhabitants of these houses and similar Draconian measures, a severe epidemic of this disease would have ensued; and this in spite of the fact that typhus fever has been almost banished from England by the progress of modern sanitation. The district where these cases of typhus fever occurred had a very bad sanitary record. The spotted maps of many years back showed that there was an exceptional prevalence of preventable disease in these houses.

A scheme for dealing with the whole neighbourhood was then elaborated. But the district is so large that it would require something like £300,000 to buy up the property. It is therefore proposed to deal at first with only a section of this area, which might be bought for £30,000; but in selecting this section the most convenient and not the most insanitary part has been chosen. The houses where the typhus fever occurred will remain standing. Then there is considerable difference of opinion as to how the scheme is to be carried out. On one side it is proposed simply to clear the space and then put up the land to auction, so that it will probably be bought up by speculative and jerry builders. It will be difficult to prevent such persons reconstituting a quarter which will become as bad as what will have been demolished. The town having so far failed to prevent the daily construction of back-to-back houses, what guarantee is there that efficient control will be exercised over the rebuilding of the insanitary areas? Others, on the contrary, urge that the municipality should obtain the necessary Parliamentary sanction to keep the land and build upon it model dwellings. This latter proposal is certainly the most promising so far as the interests of public health are concerned.

In 1891, after the epidemic of typhus fever, a special inquiry was made, and Dr. Cameron brought forward his ambitious scheme for dealing with this vast insanitary district. The area consists of no less than 37·2 acres. It is bounded by Quarry Hill on the north, Marsh-lane on the south-east, and Lady Beck on the west. It contains 2003 houses, which bring in a gross weekly rental of £382 13*s.* 9*d.*, or 3*s.* 9·85*d.* per house. If the value of these houses is estimated at a fifteen years' profit it gives us an average value for each house of £150; but it is very certain that many of the houses are not worth as much. At first it was suggested that new streets could be built and only some of the worst houses pulled down, but it now seems to be generally recognised that the only thing to be done is to condemn the entire area and remove all the houses. This, it is estimated, would cost £299.515. The prevalence of disease in this area was so great when the investigation took place that the death-rate of the area had reached during the previous six months the very high proportion of 47·3 per 1000 inhabitants. That of the whole borough was during the same period of time 26·3 per 1000, or by the corrected estimate, 25·8 as against 47·3. But this was an exceptionally unhealthy season. The death-rate for the whole year in the unsanitary area was equal to 35·51, while that of the whole borough less the insanitary area was 22·70. The death-rate of the insanitary area was thus 12·81 higher than that of the borough. It is even more significative to find that while the zymotic death-rate for the whole borough was equal to 2·40, that for the insanitary area was 7·37 per 1000. This was in the main due to measles, as the death-rate from measles in the insanitary district was equal to 4·58 per 1000, and it only amounted to 0·71 for the borough. We also find that the deaths from phthisis were 3·73 per 1000 in the condemned area and 1·79 in the borough. But then the population in the insanitary area amounts to 340 persons per acre, while that of the borough amounts to only 17 per acre. Thus it may be said that a good case has been made for condemning this area, which can only be confirmed by visiting the spot. As for the drainage, that is likewise a cause of much danger and risk. There are midden closets still remaining, and where water-closets still exist it would seem that the drains are often in a defective condition. These are now tested whenever a case of infectious disease draws attention to the houses in question. Thus in 1894 there were 2038 drains tested, and of these no less than 1653 were found defective; in 1893 there were 1579 defective out of 1845 tested; and in 1892 tests were applied to 1484 drains and 1290 were found defective. This suggests that it is not necessary to wait till disease breaks out to make such examinations, but that a house-to-house test of all drains should be enforced. Altogether, some 7000 house drains have been tested during the past four years. The work has entailed a great amount of extra labour on the sanitary inspectors, but even at this rate it will take from eleven to twelve years to examine the drains of the entire town. Seeing that the greater number of the drains examined are defective and allow sewer-gas to enter the dwellings, this testing of all the drains should not be deferred, but extra inspectors should be engaged, so as to carry it out promptly.

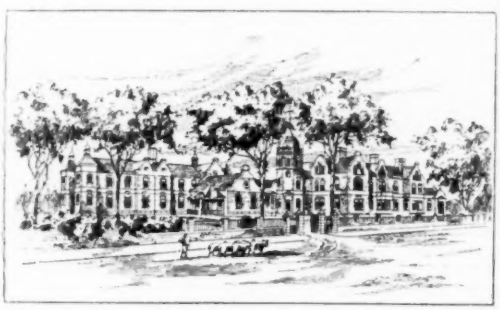
It is also proposed to deal with another and much smaller insanitary area situated in the south of the town and called Camp Fields. The prices asked for this property in 1891 were so high that the Corporation shrank from dealing with the matter. The scheme has now, however, been brought forward again. There are 272 houses and, according to the 1891 census, 1093 inhabitants. The death-rate during the years 1890–94 was equal to an average for the five years of 33·0 per 1000 per annum. The death-rate in the city of Leeds was during the same five years 21·1 per 1000 and in the west registration districts of Leeds 18·2 per 1000. In this smaller insanitary area the houses are not only back to back, but some one had had the ingenious idea of filling up the yards by which the back houses are reached with a central and supplementary row of houses. Thus one set of houses look out upon the street and have no back windows, because they are back-to-back with another set of houses that look out on to the yard. But this yard has been converted into a narrow passage by building another row of houses down its centre. Of course, this greatly abstracts the ventilation. Instead of an open yard there is a passage 17 ft. or 18 ft. wide, which in some parts narrows down to only 6 ft. Some of the windows that look north can never obtain any sunlight. In one corner there are only thirty-one square yards of open space to give light and air to all the doors and windows of three houses and half a fourth house. One row of houses looks out towards the north on a passage only 10 ft. wide; they can never get a ray of sunshine. It is now proposed to buy up and pull down the central row of houses built in the back yards, and by cutting through houses at the two ends of these back yards convert them into an open thoroughfare. This will give more air and light to the houses that are at the back of the houses giving on to the existing streets. But the back-to-back houses will remain, though their condition will be improved. This improvement, while leaving the main evil standing—namely, the back-to-back houses—will cost a good deal while not producing any receipts whatsoever. The houses in the back yards are to be purchased ahd pulled down, ratable property being thus destroyed, and nothing is to be built in their stead. The municipality also, by touching this ground and then allowing the back-to-back houses to remain standing, will appear to sanctify the principle of the back-to-back houses. Indeed, in pulling down the houses in the back yards it will destroy houses which, however defective in other respects, are not back-to-back houses, while it will allow the latter to remain standing. Better far leave the place as it is, if it be not possible to deal with the area in a thorough and satisfactory manner. In the long run it would prove much more economical to pull the entire area down and rebuild, not little cottages, but large, well-constructed, and sanitary artisans' dwellings which would hold quite as large a population as that now living on the spot, and bring in as large, if not a larger, rental. This would soon recoup the capital outlay. In any case, it would be a fatal mistake for the municipality and the sanitary authorities to set an example of toleration towards back-to-back houses. To touch a scheme which allows such abominations to remain standing would be too great a sacrifice of principle to satisfy mere momentary exigencies. If we examine the details of the death-rate of Leeds for 1894 we find that, for instance, fatal cases of diarrhœa occurred in 147 back-to-back houses, but there were only 28 cases in houses that had through draughts.

Then there were 27 cases of typhoid fever in back-to-back

houses and only 7 in houses with a through draught. For scarlet fever there were 137 cases in back-to-back houses and 76 in houses with through ventilation. Of the cases of measles that recovered 403 occurred in back-to-back houses and 128 in "through" houses. The proportion of deaths requires to be especially noted. In the back-to-back houses there were 242 deaths from measles and in the houses with through draught only 44 deaths. So that the proportion of fatality from measles is roughly from 3 to 5, or rather more than half as many deaths as there were recoveries in the back-to-back houses; whereas in the other houses the proportion is from 1 to 3, or a third as many deaths as there were recoveries. Such comparisons are sufficiently instructive. There is much work to be done at Leeds. A large part of the town must be rebuilt. There is no reason why this should not be done in a manner that will prove advantageous; but the work must be done thoroughly, even if this means that only a little can be done at a time. We trust that the result of the Local Government Board inquiry will tend in this direction.

THE ROYAL LANCASTER INFIRMARY.

THE new Infirmary at Lancaster, which was opened last Tuesday by the Duke and Duchess of York, has received from Her Majesty, at the request of her son, the title of "Royal." It is a handsome stone building standing in its own grounds on the southern outskirts of the town and having as its near neighbours the Royal Albert Asylum and the Ripley Orphanage, the former of which, by the way, was designed by the same architects as the structure under notice. It has cost £25,000 and will accommodate sixty in-patients. The main entrance is at the base of the tower. To the right of this is the three-storeyed administrative block, and still further in the same direction are the out-patient rooms, with separate entrance and exit. To the left of the tower and standing back is the children's ward, behind and beyond which is a two-storeyed pavilion, with turrets at the end, containing the two large wards. Hidden by the front block is the operation-room, and further back the kitchens, whilst the boiler and engine-house, laundry, disinfector, mortuary, and post-mortem room are detached in the rear. Two corridors open from the hall. The one to the right runs through the administrative block parallel to the front, and, passing the



house surgeon's and matron's sitting-rooms, the nurses' dining-hall, the dining-room for the staff, and finally the board-room, ends in the out-patient waiting-room. Stairs from it lead to the nurses' and servants' bedrooms which are on the first and second floors. The other corridor from the hall leads directly backwards, crossing at right angles that which joins the children's ward to the dispensary and casualty-room. Passing on, the door to the operation-room is seen on the right, then the corridor to the household department, and then the main pavilion is entered. A fire-proof staircase on the left gives access to the upper wards. The main corridor is prolonged into a small pavilion wing consisting of special wards and day-room. The arrangements on the floor above are similar. It may save repetition to note here that all the walls are lined with cement and varnished with enamel; the out-patient rooms, theatre, special wards, hall and corridor in front block, are floored with terrazzo, which consists of marble chips set in Portland cement and highly polished. It is impervious to moisture and presents a very smooth surface without cracks. In the rest of the corridors red tiles are used; in the wards polished oak-blocks set on concrete by Ebner's process. The corridors are of good size, being 9 ft. wide and 13½ ft. in height, and are most efficiently warmed.

The children's ward, 39 ft. by 24 ft., to hold ten cots, opens on a deep balcony facing nearly due south. It is to be hoped that this outside door may not be a source of draughts, and the same remark applies to those at the end of the large wards. The grate is by Shorland with a modification by Mr. Paley, whereby the fresh hot air is delivered into the room immediately above the fittings. The same arrangement is used in other parts of the hospital. A handy little scullery adjoins the ward, and built out at one end are bathrooms and lavatories. The main wards measure 75 ft. by 30 ft. by 13½ ft., and are designed to hold twenty beds each. A large central shaft passes up the middle, with a fireplace facing each end of the ward. Near the top is an exit for air, the draught being induced by a steam coil placed above. Natural ventilation by means of sash-windows with fall-in casements at the top has, however, been chiefly relied on. Air inlets are also provided close to the floor under each bed. There is good cross ventilation between the lavatories and ward. The heating is done by hot water under low pressure, which the architects prefer to any high-pressure system. It certainly is most effective. The small wards present no special features except that two of them can be filled with steam from the main boiler if required in the treatment of laryngeal cases.

The operation room is small in size but very carefully contrived. There is a good north light. The walls have a deep tile dado, above which is enamel. The floor is terrazzo. All the corners are filled in and rounded off, curved tiles being employed in places and the whole floor slopes slightly to a gutter at one side. The basins are fitted with pedal taps. A special connexion with the electric main is provided for the cautery.

The dispensary calls for no special comment. The out-patient rooms are arranged so that the patients may pass through the consulting room, past the dispensary and out, without having to turn back. The consulting room, we note, is also to serve as surgery and receiving-room: this is hardly to be commended. The kitchens are separate from the rest of the house and yet can easily be reached either from the wards or dining rooms.

The laundry is fitted with steam machinery of the latest pattern and has a drying-room. The drains have been very carefully laid down. One point is worthy of mention and that is that all the discharge pipes from the basins are double the ordinary calibre, so rendering them less easily blocked by stray sponges and dressings. The floors are connected by a hydraulic hoist (large enough to take a bed) protected on each landing by collapsible iron trellis-work gates. The whole of the buildings are lighted by electricity, extra fittings being placed near each bed for movable lamps to be attached when necessary. There is also an electric heater in each ward-kitchen for warming small quantities of food. A complete system of telephones connects all parts of the house with a switchboard in the hall-porter's room.

To sum up. It is an excellent building equipped with every modern convenience, and although a critical observer might discover a few minor points with which to find fault, the main idea has been most carefully considered and the hospital ought to be worked with economy and ease. The architects are Messrs. Austin and Paley of Lancaster, under whose immediate supervision the work has been carried out. We are indebted to their courtesy for much valuable information and also for permission to reproduce the plan of the elevation.

EXHIBITIONS OF HORSELESS CARRIAGES.

THE importance which is being attached to the subject of horseless carriages is shown by the fact that two international exhibitions are to be held in London this year. On May 9th an International Exhibition of Motors and their Appliances will be opened at the Imperial Institute and will comprise:—I. Motor pleasure carriages propelled by (1) steam, (2) oil, (3) electricity, (4) compressed air, and

(5) springs. II. Self-propelled vehicles employed on roads for trade purposes and for transport of goods, the motive-power being any of the means above described. III. Self-propelled ploughs and other agricultural implements. IV. Self-propelled cycles, the motive-power being any of the means above described. V. Wheels, tyres, axles, springs, seats, cushions, and the various parts used in the construction of the above three classes or of the machinery connected therewith. VI. Apparatus for aerial navigation. VII. Carriages and vehicles not self-propelled. VIII. Cycles not self-propelled. IX. Road maps, hotel and railway guides, and books, publications, and views for the use of tourists. X. Knapsacks, portmanteaux, cooking appliances, tents, picnic baskets, and other tourists' conveniences. XI. Launches, yachts, and boats propelled by (1) steam, (2) oil, (3) electricity, and (4) compressed air. XII. Lamps and approach signals, as applied to carriages and other road vehicles, and to launches, yachts, and boats. XIII. Watches, clocks, and compasses and pedometers. XIV. Stationary engines, dynamos, and motors. XV. Models of inventions, working and otherwise, in connexion with the foregoing.

At the Crystal Palace will be opened in May an exhibition of a more ambitious character—viz., the International Horse and Horseless Carriage and Roads Locomotion Exhibition which should possess considerable historical interest. The sections include:—I. Fine art, literature, sculpture, antiques and curios, and illustrations of primitive modes of travel. II. Ancient and modern harness. III. Ancient and mediæval carriages. IV. Ancient and modern carriage of the mails. V. Accessories to modern travel and sport. VI. Coaching. VII. Modern carriages. VIII. Modern transport. IX. Military and cycle transport. X. Material, plant, and machinery. XI. Mechanical road locomotion. This section is intended to be of historical as well as of present-day interest, as, together with modern steam, electric, petroleum, and traction plant, it is anticipated some of the old steam passenger carriages will be shown under this section; also motors of all kinds, in motion and at rest, suitable for the mechanical propulsion of vehicles of all classes upon common roads will be exhibited. XII. Horseless carriages. In this section will be included every kind of self-propelled passenger vehicle, these being shown in action in the extensive grounds, and competitions as to speed and general efficiency in actual work will be carried out. Facilities will also be given to exhibitors who may desire to show their motors in actual operation in boats and launches.

THE ANGLO-EGYPTIAN EXPEDITION TO THE SOUDAN.

WHETHER the Government have come to a right or wrong conclusion politically in this matter does not concern us; the House of Commons have decided in favour of such an expedition by an overwhelming majority. The Government, on the advice of the military experts whom they have consulted and at the instigation apparently of Lord Cromer and the Egyptian authorities, have taken action, and no time has been lost in making the necessary arrangements for carrying out their design. This much may, perhaps, be said in its favour, that such an expedition was bound to come sooner or later, and that the Italian disaster in Africa has only precipitated its occurrence. However, we are only concerned with the present history of the expedition and its medical aspects. There has been already a good deal of activity shown by the War Office of this country and especially by the Egyptian Government and officials in Cairo.

There are at present some 6000 Egyptian troops at Wady Halfa, and when the strength is brought up to 10,000 the march to Dongola will probably take place. The North Staffordshire regiment has started from Cairo in two special trains from Wady Halfa in excellent health and spirits, and there will be at least three battalions of British troops in the expedition, which will altogether amount to 19,000 or 20,000 men. The Sirdar, General Kitchener, proceeds to Assouan and thence to Wady Halfa, which will act as the base, to make the necessary arrangements, and Colonel Hunter, with a small advanced force, has reached Akasheh. In addition to the British officers forming part of the Egyptian force some thirty or forty officers from this country, most of whom have already seen service in Egypt, will join the force. Stores are being sent from Cairo to Wady Halfa, and a considerable amount of them will, in any case, have to be accumulated there, with means of transport and a number of camels and baggage animals, before any advance can be made. It is unlikely that any active operations will take place, if they can be avoided, until the Nile has risen and there has been some decrease of the extreme heat. This reminds us that very plentiful supplies of ice for the force will be found an absolute necessity, and especially for the sick, and extreme care will have to be taken in regard to the sanitary arrangements at Wady Halfa and at any other station where there is any aggregation of the force. The river Nile affords a natural and abundant supply of excellent water if that used for potable purposes can only be guarded from all sources of contamination. That the expedition is a serious undertaking cannot be denied, for, apart from the uncertainties of war and the strength of the forces which Osman Digna can bring into the field and maintain there—they are a brave and formidable enemy, as we have reason to know—the heat of the climate, as far as the European part of the Anglo-Egyptian expedition is concerned, may be expected to have an inimical effect and be productive, as we have said, of heat stroke, fevers, and dysentery, and, unless great care is taken and we have exceptionally good fortune, enteric fever may also give rise to much sickness. It is fortunate that the climatic heat is a dry heat; animal and organic impurities commonly desiccate and mummify instead of undergoing those putrefactive change for which moisture is a necessary condition, and there is a comparative absence of malaria. Some of the fevers—which for want of a better or more accurate term may be called heat fevers—are very peculiar; the clinical temperatures are high and out of all proportion to the acceleration of the pulse-rate, and they are apt to persist for a long time (the febrile state not yielding to the action of quinine and anti-malarial remedies), and to be followed by a liability to neuralgic and quasi-rheumatic attacks or conditions of neurasthenia. Diarrhœa and dysentery are also frequent diseases in this as in all hot climates. It seems a pity that some of our Indian troops, the Ghurkas and Sikhs, cannot be employed on this campaign, for they are eminently fitted for it and escape the diseases to which Europeans are so liable in tropical and sub-tropical climates.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6416 births and 3996 deaths were registered during the week ending March 21st. The annual rate of mortality in these towns, which had been 20·7 and 20·0 per 1000, in the two preceding weeks, further declined last week to 19·2. In London the rate was 18·8 per 1000, while it averaged 19·4 in the thirty-two provincial towns. The lowest rates in these towns were 12·7 in Gateshead, 13·1 in Portsmouth, 13·2 in West Ham, 14·4 in Leicester, and 15·1 in Cardiff; the highest rates were 22·8 in Salford, 23·9 in Manchester, 24·3 in Birkenhead, 24·7 in Preston, and 26·9 in Norwich. The 3996 deaths included 578 which were referred to the principal zymotic diseases, against 590 and 636 in the two preceding weeks; of these, 240 resulted from measles, 169 from whooping-cough, 72 from diphtheria, 42 from scarlet fever, 29 from diarrhœa, 25 from "fever" (principally enteric), and 1 from small-pox. No fatal case of any of these diseases occurred last week in Plymouth; in the other towns they caused the lowest rates in Huddersfield, Halifax, and Nottingham, and the highest rates in Birmingham, Oldham, Sunderland, Salford, London, and Norwich. The greatest mortality from measles occurred in Birkenhead, Sunderland, Burnley, Oldham and Norwich; and from whooping-cough in Salford, London, Bolton, Derby, Cardiff, and Bradford. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 72 deaths from diphtheria included 52 in London, 6 in Birmingham, 3 in West Ham, and 3 in Liverpool. One fatal case of small-pox was registered in Swansea, but not one in any other of the thirty-three large towns. There were 43 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 21st inst., against 51, 52, and 42 at the end of the three

preceding weeks; 9 new cases were admitted during the week, against 1, 13, and 4 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2773, against 2933, 2857, and 2764 on the three preceding Saturdays; 277 new cases were admitted during the week, against 244 and 217 in the two preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 433 and 377 in the two preceding weeks, further declined to 345 last week, and were 172 below the corrected average. The causes of 59, or 1·5 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Leicester, Sunderland, Newcastle-upon-Tyne, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Preston, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·2 and 19·6 per 1000 in the two preceding weeks, was again 19·6 during the week ending March 21st, and slightly exceeded the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 10·7 in Paisley and 12·6 in Leith to 23·3 in Aberdeen and 27·4 in Perth. The 572 deaths in these towns included 29 which were referred to whooping-cough, 14 to diarrhœa, 13 to measles, 6 to "fever," 4 to diphtheria, 4 to scarlet fever, and not one to small-pox. In all, 70 deaths resulted from these principal zymotic diseases, against 64 and 72 in the two preceding weeks. These 70 deaths were equal to an annual rate of 2·4 per 1000, which was 0·4 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had increased from 27 to 35 in the three preceding weeks, declined again to 29 last week, of which 20 occurred in Glasgow and 5 in Aberdeen. The fatal cases of measles, which had been 6 and 9 in the two preceding weeks, further rose to 13 last week, and included 10 in Glasgow and 2 in Edinburgh. The deaths referred to different forms of "fever," corresponded with the number in each of the two preceding weeks, and included 5 in Glasgow. The fatal cases of scarlet fever, which had increased from 3 to 7 in the three preceding weeks, declined again to 4 last week, of which 2 occurred in Glasgow and 2 in Aberdeen. The deaths from diphtheria, which had been 6 and 3 in the two preceding weeks, were 4 last week. The deaths referred to diseases of the respiratory organs in these towns, which had been 106 and 116 in the two preceding weeks, were 115 last week, and were considerably below the number recorded in the corresponding period of last year. The causes of 28, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·4 and 28·3 per 1000 in the two preceding weeks, declined again to 25·4 during the week ending March 21st. During the past twelve weeks of the current quarter the death-rate in the city has averaged 25·3 per 1000, the rate during the same period being 19·7 in London and 17·7 in Edinburgh. The 170 deaths registered in Dublin during the week under notice showed a decline of 20 from the number in the preceding week, and included 7 which were referred to the principal zymotic diseases, against 7 and 10 in the two preceding weeks; of these, 3 resulted from diphtheria, 2 from whooping-cough, 1 from scarlet fever, 1 from "fever," but not one either from small-pox, measles, or diarrhœa. These 7 deaths were equal to an annual rate of 1·0 per 1000, the zymotic death-rate during the same period being 3·7 in London and 1·9 in Edinburgh. The 3 fatal cases of diphtheria were the first recorded within the city since December last. The deaths referred to whooping-cough, which had been 3 and 2 in the two preceding weeks, were again 2 last week. The mortality from scarlet fever and from "fever" showed a decline from that recorded in the preceding week. The 170 deaths in Dublin last week included 18 of infants under one year of age, and 44 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked decline from the numbers recorded in the preceding week. Eight inquest cases and 4 deaths from violence were registered; and 50, or nearly a third, of the deaths occurred in public institutions. The causes of 6, or nearly 4 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL COATS has been appointed to Ayr in succession to Brigade-Surgeon Macfadin, retired pay. Surgeon-Major Hackett has been posted to Aldershot, and Surgeon-Major Kelly to Netley. The arrival of Surgeon-Captains Allport and Luther in Malta is reported, and Surgeon-Major Tidbury has left Malta on relief. Surgeon-Major Braddell and Surgeon-Captain Harris proceed to Egypt on March 27th, and Surgeon-Major Dugdale and Surgeon-Captain Daly are under orders to proceed. Brigade-Surgeon-Lieutenant-Colonel O'Connell has been appointed to the medical charge of the Royal Infirmary in succession to Brigade-Surgeon-Lieutenant-Colonel Holmes, under orders for Gosport.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Lieutenant-Colonel Smith, A.M.S., is transferred from the Deesa district to the Poona district; Surgeon-Major Mitchell, A.M.S., is transferred from the Poona district to the Deesa district; Surgeon-Captain Melville, A.M.S., is transferred from the Mhow district to the Poona district; and Surgeon-Captain Stoney, A.M.S., is transferred from the Quetta district to the Mhow district. Dr. H. A. Macleod is confirmed as an Uncovenanted Medical Officer in the North-Western Provinces and Oudh. Surgeon-Captain A. G. Hendley, Officiating Civil Surgeon, Seoni, whose services have been placed permanently at the disposal of the Chief Commissioner of the Central Provinces by the Government of India, Home Department, is confirmed in his appointment with retrospective effect from April 21st, 1893.

NAVAL MEDICAL SERVICE.

Staff-Surgeon Charles Albert Macaulay, M.D., has been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet.

The following appointments are announced:—Fleet-Surgeons: H. E. Cross to the *Hibernia*, additional for service in Malta Dockyard (to take effect on the *Nelson* arriving at Malta); W. E. Breton M.D., to the *Trafalgar*; and V. Duke, M.D., to the *Nelson*. Staff-Surgeons: Henry Harries to the *President*, additional; and W. M. Lory to the *Edgar*. Surgeons: H. Spicer, M.B., to the *Trafalgar*; L. Lolan, M.B., to the *Nelson*, for duty on the voyage home; and J. Lowney to Chatham Hospital.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain William Collingridge, M.D., resigns his commission. Surgeon-Lieutenant Edmond William St. Vincent Ryan, 16th Middlesex Volunteer Rifle Corps, to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: 1st Lanarkshire; Surgeon-Lieutenant A. K. Chalmers, M.D., to be Surgeon-Captain. *Rifle:* 2nd Volunteer Battalion the Gloucestershire Regiment: Surgeon-Captain W. M. Hope resigns his commission. 2nd Volunteer Battalion the Duke of Cambridge's Own (Middlesex Regiment: Surgeon-Captain H. G. G. Wilkins resigns his commission.

THE VOLUNTEER OFFICERS' DECORATION.

The Queen has conferred the Volunteer Officers' Decoration upon the undermentioned officer of the Volunteer Force:—*North-Eastern District: Rifle:* 5th Volunteer Battalion the Durham Light Infantry; Surgeon-Major Philip Brown, retired.

THE ITALIANS IN AFRICA.

The state of Italian affairs in Africa, although it has undergone no essential change, has on the whole rather improved. Kassala still holds out, in spite of the fact that it is pretty well surrounded, and the Dervishes in its vicinity have made repeated attacks on the Italian garrison, but have been repulsed. Some severe fighting has taken place at the pass of

Sabderat, and reinforcements have been sent from Kassala to that place, which is held by the Italians with two native battalions and a force of artillery. The road between Agarda and Sabderat is still open, and it is intended to strengthen Captain Stefani's column at Agardat. The fort at Adigrat is being successfully held by the Italians, and as it is provisioned to the end of April and has a plentiful supply of water it will probably hold out for a time. Everything depends, of course, upon a sufficiency of water and provisions at the places occupied by the Italians. A number of stragglers and wounded from the battle of Adowa are coming in. General Baldissera has received final instructions from the Government at Rome as to the terms on which a treaty of peace can be made with King Menelek and the Shoans. The Russian Government have dispatched a section of the Imperial Red Cross Society to the aid of the Abyssinian forces. We are much afraid, with all the fighting that took place at the disastrous battle at Adowa and the desultory warfare that has subsequently ensued at different parts, together with the difficulties attending the food and water supply and the provision of surgical and nursing aid to the wounded, that the sufferings and loss of life among the soldiers of both sides have been very great. Unfortunately for Italy she is greatly crippled by the bad state of her finances, and the conclusion of a satisfactory treaty of peace is greatly to be desired.

PEMBROKE CAMP, MALTA.

Our readers will probably have noticed that questions in Parliament regarding the health of the troops and the sanitary state of camps and barracks are nowadays more fully and frankly answered than was formerly the case. We are glad to observe that the War Minister for the time being, or his representative, does not content himself with the barest possible statement of facts, but commonly affords Parliament the latest and best information available. The Marquis of Lansdowne, for example, in reply to a question the other day in the House of Lords, entered pretty fully into details in connexion with the occurrence of some fatal cases of enteric fever at Pembroke Camp in Malta and into the past medical history of that camp and the very serious sanitary defects that had been discovered there and reported on by a committee as long ago as in 1894. The War Minister pointed out the practical difficulties that had presented themselves in the way of promptly providing a new and effective system of drainage. He added, however, that he fully recognised the importance of the subject and that it required the attention which he promised should be given to it. We wish that inquiries into matters connected with the sanitary state of our naval and military forces were always considered in the same spirit. The fact is—and it is one well known to the War Office authorities—that the condition of many of the barrack buildings and camps, both at home and abroad, renders it necessary that a work of reconstruction should extensively be carried on and that considerable expenditure must be incurred for the purpose.

THE SITE OF THE NEW NAVAL COLLEGE.

In the discussion which recently took place in the House of Commons on the Naval Works Bill there was considerable difference of opinion in regard to the best site for the erection of a naval college on shore as a substitute for the *Britannia*. As to the proposal to give up the *Britannia* we think the Admiralty amply justified in this respect, for the vessel is, on hygienic and other grounds, altogether unsuitable for the purposes of a training college for naval cadets. But we are not by any means so sure of the wisdom and expediency of selecting Dartmouth as a site for the new college. It is true that the site is an open and elevated one and exposed to the winds of Dartmoor, but the climate of Devonshire is moist and relaxing instead of bracing and invigorating, and in that respect, however healthy and suitable it may be for many people, it does not seem to us to be the best that could be chosen for the physical development of growing lads. Moreover, if some elevated and open site in the neighbourhood of the Solent were selected Haslar Hospital would presumably be available for cases of sickness occurring among the cadets, especially for such as required isolation; whereas a hospital, with proper isolation wards separated from the main building, would require to be built at Dartmoor. We think Sir A. Armstrong and Dr. Reid were right in the conclusion at which they arrived in the matter.

DEATH IN THE SERVICES.

Surgeon-General John Hendley, C.B., M.R.C.S., L.S.A., at Wallingford last week. He entered the Army Medical Service in 1851 and retired in 1887 with the rank of Inspector-General. He was wounded at Gambia forty years ago in an engagement with the Mahommedans. Later he saw active service in the Indian North-West Frontier war, and was present at the storming of the Conical Hill and at the destruction of the village at the foot of the Bonair Pass, which episode concluded the struggle and marked the submission of the hill tribes. For this campaign he was awarded the medal and clasp. In the Afghan War of 1878–9 he was the principal medical officer of the Western Afghanistan field force, and after the war he was made a Companion of the Bath. He acted as principal medical officer at Aldershot till the time of his retirement, and his regretted death at the age of sixty-eight took place after a very short illness.

THE MILK-SUPPLY OF ALDERSHOT CAMP.

Much indignation locally has been expressed at the intention of the War Office to open a dairy on the Government sewage-farm at Aldershot—of all places in the world—whence the troops will be supplied. At a meeting at the Conservative Club on March 17th the Government competition with dairymen was largely dwelt on, and Mr. Stroyan, among others, pointed out the readiness of milk to absorb deleterious matter and its extensive powers of spreading contagion. Town water, it appears, is to be laid on to the proposed dairy. Resolutions and a memorial to the local members of Parliament and to Mr. St. John Brodrick—who represents the adjoining division—were prepared and a deputation appointed.

It is notified that the Queen's Birthday will be celebrated on Wednesday, May 20th next, at all Naval and Military Stations, as well as in London.

The claims of all officers above the rank of Surgeon-Major to promotion are now brought under the cognisance of the Promotion Board in Victoria-street.

Correspondence.

"Audi alteram partem."

"THE OBJECTS AND LIMITS OF OPERATION FOR CANCER."

To the Editors of THE LANCET.

SIRS,—Mr. Marmaduke Sheild's sententious remarks in THE LANCET of March 21st, unsupported as they are by facts, do not at first sight appear to call for any reply; as, however, he introduces my name, and as it might thus appear that he is attempting to controvert something in my lectures—which, by the way, he did not do me the honour to attend and has apparently not read—it may be well if I reiterate shortly my views on the curability of cancer. The facts on which these views are founded are referred to in my lectures and can readily be multiplied if necessary.

1. I believe that cancer is curable by thorough operation in a certain proportion of cases, the term curable being used in the only sense in which it can be employed in reference to neoplasms—that is to say, I believe that in a certain proportion of cases the disease can be entirely rooted out by operation and will not recur. 2. The proportion of cures depends (*a*) on the degree of malignancy of the disease, (*b*) on the thoroughness with which the operation is done, and (*c*) on the earliness of the operation. 3. Recurrence after operation means in the great majority of cases imperfect removal and continued growth of cancerous tissue left behind, and not a fresh outbreak of the disease. In some rare instances of epithelioma the latter may, however, be the case, as in an example to which I referred, where, years after removal of a cancer in the mouth, a colloid cancer developed in the stomach. In the case of the breast, however, where the gland has been entirely removed, recurrence, however late, cannot imply a fresh outbreak of disease, but can only mean continued growth of disease left behind by the surgeon at the original operation. 4. As to the period of time at which

one may reckon that the risk of recurrence has passed no absolute limit can be laid down, but in the case of the breast Volkmann's three-year limit is fairly accurate and very convenient. I pointed out, however, that it was not absolute, and referred to cases in which recurrence had become manifest at a later period. The proportion of such recurrences is, however, quite small and, as I mentioned, the highest estimate is given by König, who places it at 15 per cent. Thus, of breast cases apparently quite free from disease after three years, something like 85 per cent. may be looked on as permanently cured. No time limit can be assigned for the other 15 per cent.; they are usually cases of atrophic scirrhus which has been imperfectly removed and are slow in recurring, and in some of them probably the examination at the end of three years has been imperfect. In the case of the rectum the limit must be considerably extended, for, as is evident from several statistics, about 40 per cent. of those apparently well at the end of three years subsequently recur.

I must apologise for taking up your space so soon with the repetition of these points. They were all carefully laid down in my lectures and will be quite clear to any one who reads them intelligently and without prejudice.

I am, Sirs, yours faithfully,

March 23rd, 1896. W. WATSON CHEYNE.

To the Editors of THE LANCET.

SIRS,—In reference to Mr. Watson Cheyne's recent lecture on mammary cancer, reported in THE LANCET of Feb. 15th last, does it not seem that the following case, recently under my care and showing the lymphatic connexion of the mammary gland, points to the importance of removing the supra-clavicular glands in early cancer of that organ if as good a chance as possible of radical cure is aimed at in every case? A patient six weeks after delivery complained of a swelling recently formed above her left clavicle and of pain in, and tenderness of, the breast on that side; ill-developed nipples had altogether prevented suckling. On examination the lobules of the breast were found to be distended with milk, and the swelling above the clavicle was an enlarged lymphatic gland resulting therefrom. The axillary glands were unaffected. After treatment directed to the breast the adenitis diminished. She informed me that after her previous confinement she had a similar state of affairs, and a scar adjacent to the above swelling showed where a similarly affected gland had suppurated and burst.

I am, Sirs, yours truly,

LIONEL N. HARDING, M.B. Camb.

Brighton, March 18th, 1896.

THE QUESTION OF MEDICAL DEFENCE.

To the Editors of THE LANCET.

SIRS,—In answer to Dr. Heron and Mr. Bruce Clarke, I have only to draw the attention of your readers to your report of the annual meeting of the Medical Defence Union in your issue of Feb. 29th, 1896, and to my former letter in your issue of the 14th inst. In the latter I wrote that "up to March 6th, 1896, the only point of difference remaining was, as I had stated previously at the meeting, that of the name of the amalgamated bodies. On March 6th, however, Mr. Oakley, solicitor to the London and Counties Medical Protection Society, raised a number of fresh obstacles which I sincerely hope and expect the combined councils will have no difficulty in removing." All this being correct I am still of that opinion, and remain Yours faithfully,

March 25th, 1896. VICTOR HORSLEY.

"FUNCTIONAL APHONIA IN MAN; TREATMENT, ETC.; WITH SPECIAL REFERENCE TO SO-CALLED VARICOSE VEINS AT THE BASE OF THE TONGUE."

To the Editors of THE LANCET.

SIRS,—It will be obvious to all who have followed this controversy that unless a categorical denial be given to Mr. Lennox Browne's "confident" expectation—viz., that the signatories of the conjoint letter published in THE LANCET of Feb. 29th would now feel that they had been somewhat in a hurry to endorse Dr. Herbert Tilley's and Dr. Watson Williams's views as stated in THE LANCET of Feb. 15th and 22nd—their silence would in all probability be misconstrued as Dr. McBride's and Dr. Williams's plain statements had been misconstrued. Allow me, therefore, to say, first, that the real question at issue is not (as casual readers might have been led to believe from the prominence given to this point in Mr. Lennox Browne's last letter) whether Dr. Watson Williams has changed his former opinions, but whether the so-called varicose veins at the base of the tongue, alone or as part of a "complex" condition, represent an actual disease, very often necessitating, to judge from my personal experience, in the opinion of its partisans galvano-caustic interference. Secondly, permit me to state that, so far from regretting that I have expressed a definite opinion to the contrary, I should do so to-morrow again were it necessary, and in stating this I have not the least doubt that I express the feelings of all the signatories to the conjoint letter, one of whom is at present abroad.—I am, Sirs, yours faithfully,

Wimpole-street, March 24th, 1896. FELIX SEMON.

To the Editors of THE LANCET.

SIRS,—In his letter of March 2nd, published in THE LANCET of March 7th, Mr. Lennox Browne, on the strength of a manipulation which I exposed in THE LANCET of March 14th, claimed me as his ally. After I had repudiated that position Mr. Browne now, in his letter of March 16th published in THE LANCET of March 21st, deems fit to doubt the sincerity of my convictions. Considering that this remarkable change of front with him required only one fortnight, it is surely rather hard that he, of all persons, should twit me with inconsistency. At the same time I am grateful to him for having given me the opportunity of now publicly expressing my regret that I should ever have had so much confidence in his teaching as to pen the sentences he quotes. In the preface to my book I state expressly "only to a very limited degree can I lay claim to originality, as my purpose has been simply to reflect the present state of knowledge in this department of medicine;" and I further say, "the greater portion of this work was written a year ago, but from unavoidable causes its publication has been delayed." When in 1893 I wrote the sentences now brought forward against me I, *bonâ-fide*, accepted as facts the statements put forth by Mr. Browne, never dreaming what use was made of them in practice. Subsequent personal experience convinced me that the pathological importance of the so-called varicose veins had been grossly exaggerated, and just because I had unwittingly assisted in promulgating views which, as now shown in your columns, are put into practice with most deplorable effects I considered it my duty to record my personal experience in the letter which you were good enough to publish in THE LANCET of Feb. 22nd. I do not think it in the least derogatory for anyone to modify his views if he sees that he has been mistaken, and if I now regret one thing it is that I did not expressly say in my first letter that I wished to correct my former utterances on the subject. But had I done so I should have laid myself open to the accusation that I wished covertly to advertise my book.

However hard Mr. Browne may try to confuse, even in his last letter, the real issue, I venture to hope that the eyes of the profession are now opened to the reality of the abuses denounced by Drs. Tilley and Coates, and if the frank confession of my own conversion to better views exposes me in the eyes of Mr. Browne and his friends to the reproach of inconsistency I trust that a different interpretation will be accorded to it at the hands of the bulk of the profession.

I am, Sirs, yours faithfully,

Clifton, Bristol, March 23rd, 1896. P. WATSON WILLIAMS.

To the Editors of THE LANCET.

SIRS,—Doubtless many of your readers in other branches of the profession besides that more immediately concerned have been interested in the discussion on "lingual varix." As a general practitioner I have noted with pleasure the outspoken protest of several laryngologists against what they regard as the exaggerated importance attached to a trivial condition. Without venturing to express an opinion upon the question at issue, may I be permitted to relate the experience of a relative of mine. I give it as nearly as possible in the patient's own words. He consulted a specialist, complaining of "hoarseness in singing," and was

informed that his complaint was due to "varicose veins," which "had to be cauterised." On an appointed day the galvano-cautery was applied. At his next visit this proceeding was repeated. Returning after a few days as directed, the patient informed the operator that the symptoms were unrelieved. On this occasion the nasal passages were explored by the specialist, who exclaimed, "You have a lot of polypi in your nose; we must get rid of these at once." This was done and the polypi displayed to the patient's gaze, "the largest being as big as a large pin's head," and the patient was informed that the persistence of his symptoms was due to the reflex irritation of these "polypi." Unfortunately the patient obtained no relief from these procedures, but he was informed that he "could not expect to be well in a few weeks"; he "must return in six months." This, however, he did not do, as he had derived no benefit from the operations to which he had submitted.

I am well aware that this episode is by no means characteristic of laryngology, yet it shows that there is reason for observing that the pain and expense to the patient are factors not to be ignored, and it is a matter for congratulation that the protest comes from specialists in that branch of medicine. It is possible that from internal evidence the specialist in question may recognise this case and will understand that when "lingual varix" is discovered the enthusiasm is often somewhat one-sided when, as in this case, the patient continues to suffer to the end of his life from the symptoms for the relief of which he has submitted to operation.

I am, Sirs, yours &c.,

March 13th, 1896. C. W. J. BRASHER.

To the Editors of THE LANCET.

SIRS,—Last week I was obliged to ask space that I might expose the discrepancy between the opinions of Dr. Watson Williams on this subject as expressed in his book published in October, 1894, and in his letters to THE LANCET in February and March, 1896. I am again compelled to intrude on you for the purpose of emphasising a still more amazing lapse of memory on the part of Dr. Herbert Tilley, and I cannot do so better than by placing recent utterances from him on two points in this discussion in parallel columns.

"I have never stated or inferred that it is a special doctrine of *Mr. Browne's Hospital (sic)* that functional aphonia is due to varicose veins at the base of the tongue as he now *insinuates" (iter sic).*—THE LANCET, March 21st, 1896, p. 803.	"Case of Functional Aphonia in Man, &c. "The following case which has recently come under my notice ..... was said to be due to varicose veins at the base of the tongue, the appropriate treatment being cauterisation by means of the galvano cautery, a pathology and treatment which, I believe, emanate from an institution in London where diseases of the ear, nose, and throat receive special attention."—THE LANCET, Feb. 15th, 1896, p. 412.
"Mr. Browne now carefully avoids reply to my offer—viz., to give him the names of the patients and of the consultants."—THE LANCET, March 21st, 1896, p. 802.	"If, however, Mr. Lennox Browne wishes for the names of the consultants referred to and the patients I shall be perfectly willing to publish them (with their permission and that of the editors) in a coming number of THE LANCET."—THE LANCET, Feb. 29th, 1896, p. 582.

Very little comment is needed by those who have followed this discussion, but unless Dr. Tilley is prepared to deny that he referred to the Central London Throat, Nose, and Ear Hospital, which—with poor compliment to the colleagues who treated him so hospitably—he calls mine, as the source of emanation of the extravagant doctrine rightly ridiculed by him, it is difficult to recognise the two statements first paralleled. If Dr. Tilley does make that denial I must again ask him at what other institution in London of a like kind is such a doctrine taught and what printed evidence he has for his statement?

As to the giving of names. Has Dr. Herbert Tilley, like other of my opponents, no sense of humour? Did he for a moment suppose that I should treat his conditions seriously? On him lies the *onus probandi*, and only with his first case of functional aphonia which forms the title of his communication have I to deal. Of course I want the names—I have asked for them—but how can I give him the permission to publish that of either consultant or patient of whose identity I am ignorant; and is it likely that Dr. Tilley will obtain that of the consultant who, to quote from his reply to Dr. Holloway,[1] he not only infers but asserts, treated a condition as diseased which did not exist? There was, however, nothing to prevent Dr. Tilley from giving the name of the medical attendant who brought him the patient and this would have at least afforded some clue to identity and an evidence of good faith. But even this he has not done.

I have already expressed my conviction that if the facts of his report are correct this case was never in my hands, but if Dr. Tilley thinks it was he is quite at liberty to declare it.

No, Sirs, it is not I who have made the pitfall in which Dr. Tilley is floundering. I have only by my "rhetorics" brushed away the insecure "basis of his facts" (!!!) and if he wants to once more stand on firm ground it is not for me to lift him up, but for himself to climb down.

I am, Sirs, yours faithfully,

Mansfield-street, March 23rd, 1896. LENNOX BROWNE.

*** We do not see that Dr. Tilley is "floundering in any pitfall" (or, we may add, if he is, that the best way to escape from a pit is to "climb down"), and consider that the points raised by Mr. Lennox Browne in this last letter are not germane to the controversy. We have referred to the correspondence in a leading article this week. We can give no more space to the subject.—ED. L.

"THE EAST END MOTHERS' HOME."

To the Editors of THE LANCET.

SIRS,—In your comments upon the report of the East End Mother's Home, you allude to the mortality returns as being incorrect. In drawing up the statistics I have mentioned those who died while under the care of the home, both in and out-door—in the eleven years ending Dec., 1895, twelve died. Three deaths occurred during the same period which at the time had ceased to be under the care of the home and were as follows:—Case 1: Dysenteric diarrhœa, died in the London Hospital. Case 2: Pneumonia beginning fourteen days after delivery, then attended by the parish officials, died at home. Case 3: Peritonitis, removed to the parish infirmary at her own request and died there.

I am, Sirs, yours obediently,

Mile-end, March 24th, 1896. M. C. CORNER.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 21st you refer to an unfavourable criticism of the above institution which appeared in your columns last year and remark that "you regret to find that many of the features to which you then called attention remain as before." This refers to a series of statements which met with a flat denial by our medical officer the following week. So far from expressing your regret or endeavouring to prove your points you took no notice of the denial and now repeat some of your former statements on the ground that "we are informed." The points on which you "are informed"—viz., as to fraudulent or careless statistics—if stripped of all verbosity amounts to a charge that women have died in their own homes or in some general hospital after being attended in the Home and they have been reported as "recovered." Now the Home is far away from all general hospitals except the London Hospital, and it is extremely unlikely that any such cases would have found their way to any other.

The obstetric physician, Dr. Herman, and the assistant obstetric physician, Dr. Lewers, of the London Hospital, under whose care such cases must have been admitted, are both of them members of the consultative staff of the Mothers' Home and must have known if any such cases had occurred, and should certainly have remonstrated with the medical officers and committee on the danger of discharging patients before being fully recovered. The Home has also been countenanced at its annual meeting by many of the leaders among the obstetric physicians of London and has received much support from intelligent philanthropists, who would certainly not contribute their names, their time, or their money if its character were proved to be such as your informant insinuates. You also note that whilst on our title page we point, "supported entirely by voluntary contributions," we yet charge a fee of 3*s.* 6*d.* to women attended in their own homes. The Home was established as a free

[1] THE LANCET, Feb. 23th, 1886.

home, and t remains free—it is entirely supported by voluntary contributions—not one penny voluntarily contributed goes to meet any payment made by a patient. The out-patients' department is separate from the Home itself, and is self-supporting with the exception of one generous donation given year by year for the express purpose of establishing this out-door work. Last year you intimated that the committee were disingenuous in not placing it on record in the report that a fee was charged to out-door patients, and it was on purpose to meet this criticism that in this year's report we mention the fact of such a fee being charged. I might remind you that other charities which advertise as supported by voluntary contributions also have out-door work connected with their free institutions for which fees are charged, notably the London Hospital Trained Nurse Supply System. Criticism may be of two kinds—honest criticism, which has for its object the removal of defects, and for that we are most grateful and are ready to profit by it; and carping criticism, whose only object is to discredit the object criticised. In this latter criticism I must confess that your "informant" has indulged. I would willingly acquit the distinguished editors of any real intention to injure an institution which has done and is doing so good a work amongst the East London poor, but it is difficult to understand the attitude of one who has not the courage to attack openly, who will not let his victim see his face, but prefers to stab in the back and in the dark, and it would be kinder if your informant would write his own name and would state what his information really is that the public may know what amount of credit his statements deserve. I will only say in conclusion that the committee of the home would welcome any inquiry into their modes of work, and if you, Sirs, would nominate any gentlemen or ladies, whether of the Faculty or not, to visit and report on the home, its methods, and its results, every facility would be given to them, and the committee would gladly consider any suggestions they might be pleased to make for the better management and increased efficiency of the charity. I am, Sirs, yours truly,

MARMADUKE HARE,
Chairman of the Committee of Management, Rector of Bow, and Chairman of the Poplar Board of Guardians.
The Rectory, Bow, E., March 24th, 1896.

"AN UNSATISFACTORY VERDICT."

To the Editors of THE LANCET.

SIRS,—At the commencement of your remarks upon the above subject in THE LANCET of Feb. 15th you state that "a coroner's inquiry often falls short of success in its primary and essential function—the ascertaining of the cause of death." That this is a fact everyone who is in the habit of reading the daily papers must acknowledge and regret. To what, then, is this failure due? As bearing very directly on the subject I wish to mention two cases which have come under my own observation. In the first —— was found dead only a few hours after obtaining advice for a somewhat serious condition in my own house. As distinct evidence of his having recently consulted a medical man the bottle of medicine was found in his pocket. The body was removed under the superintendence of the police and the coroner's inquest held. No medical evidence was called and apparently no questions were asked as to where or for what purpose the medicine was obtained. I could if required have given a very probable cause of death, which could easily have been verified or disproved by a post-mortem examination. The cause which would have been suggested was, I believe, absolutely unknown to the relatives and other witnesses, so that no evidence could possibly be forthcoming upon the subject. The jury, however, easily came to a decision and found a verdict, the only result of which was that the body was allowed burial in consecrated ground.

In the second case —— was found dead at 10 A.M. in a small stream of water situated in an extremely lonely place about half a mile from her own home. A messenger was despatched for myself and for the police, and I at once responded to the summons. On my way to the place I was informed that the deceased had not been seen, so far as was then known, since 8 P.M. on the previous evening. I found that the local constable could not be present for some hours, and on my arrival I had the body removed after carefully noting the position and all surroundings. The water was about two feet deep, the face was turned downwards and to the left, the whole body rigid, the hands not clenched, the skin blue and sodden, and the mouth firmly closed. Rightly or wrongly, I deferred a more thorough examination until after the police had had an opportunity of seeing the body, contenting myself with an inspection of the head and other parts which could be easily seen without being stripped. I paid special attention to the surrounding ground and to some articles of clothing which had been removed before the immersion. To my amazement I was informed the same night that the inquest would be held on the next day and that I should probably not be wanted. The inquest was held and I was never called; consequently evidence which could only have been given by myself was never obtained. The constable's version of my opinion was given and apparently accepted by the coroner and jury, though I considered that I had not sufficient grounds for coming to a decision and certainly made no statement. The verdict of "Found drowned" was arrived at without either coroner or jury seeing the place where deceased was found. Now I wish to know what possible benefit can result from such inquiries. They do nothing to assist in the conviction of the guilty or to help to clear up the characters of innocent, but probably suspected, persons.

In nearly every case of open verdict there will be doubt in some minds as to how death was caused, and I contend that such an open verdict should never be considered sufficient unless every possible piece of evidence has been sifted in vain. If we as medical men raise our voices in the matter we lay ourselves open to the ungracious rebuff mentioned in THE LANCET of Feb. 29th—"you want to open the body and get your two-guinea fee"—or to the almost equally absurd one of wanting to give evidence and get a guinea. Is it for giving evidence or for the previous investigation that we are paid? Is the present mode of conducting inquiries consistent with the highly important position which a coroner's court ought to hold? If it is to continue to hold such a position, surely it is high time that a medical man should be invariably present either as coroner or witness or both.

I am, Sirs, yours faithfully,
C. H. POWERS, L.R.C.P. Lond., M.R.C.S. Eng.
Gosforth, Cumberland, March 17th, 1896.

"AN OVERDOSE OF STRYCHNINE."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Feb. 29th was an account of a medical practitioner's unpleasant experiences after an overdose of "strychnine." It interested me very much, as I have had a similar experience of the "tetanus," a short account of which I send you, as another added to almost a rare occurrence. Three years ago I was reading for an examination, and feeling "run down" I took 10 minims of strychnia solution (B.P.) with the same quantity of dilute phosphoric acid well diluted twice a day. On the second day of taking it, towards the evening, I felt a tightness in the "facial muscles" and a peculiar metallic taste in the mouth. There was great uneasiness and restlessness, and I felt a desire to walk about and do something rather than sit still and read. I lay on the bed and the calf muscles began to stiffen and jerk. My toes drew up under my feet, and as I moved or turned my head flashes of light kept darting across my eyes. I then knew something serious was developing, so I crawled off the bed and scrambled to a case in my room and got out (fortunately) the bromide of potassium and the chloral. I had no confidence or courage to weigh them, so I guessed the quantity—about 30 gr. bromide of potassium and 10 gr. chloral—put them in a tumbler with some water, and drank it off. My whole body was in a cold sweat, with anginous attacks in the precordial region, and a feeling of "going off." I did not call for medical aid, as I thought the symptoms declining. I felt better, but my lower limbs were as cold as ice and the calf muscles kept tense and jerking. There was no opisthotonos, only a slight stiffness at the back of the neck. Half an hour later, as I could judge, I took the same quantity of bromide of potassium and chloral, and a little time after I lost consciousness and fell into a "profound sleep," awaking in the morning with no unpleasant symptoms, no headache, &c., but a desire "to be on the move" and a slight feeling of stiffness in the jaw. These worked off during the day. The recollection of that night is so indelibly fixed on my memory that I shall never forget it. Although not so bad as your other correspondent it is "added testimony" to his. Trusting this may be of use, I am, Sirs, yours faithfully,

LEONARD SANDALL,
Railton-road, Herne-hill, S.E., March, 1896. Student in Medicine.

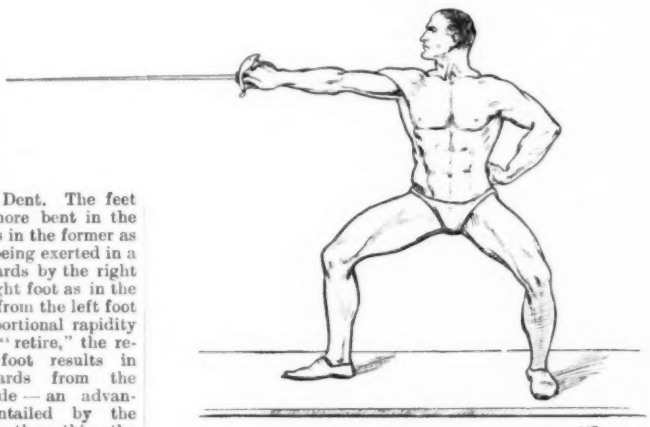
"THE NEW INFANTRY SWORD EXERCISE."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Nov. 30th, 1895, there appeared an article by Mr. Dent, in which he regrets that "a system based on sound scientific principles should be replaced by one that possesses no such advantages." Apart from the general merits of the two systems—on which the military experts in England and the results of the competitions at the Royal Military Tournaments both at London and at Dublin have decided in favour of the Italian or new system—I shall be glad if you will permit me to answer some of the particular arguments used by Mr. Dent against this system. He describes the two "on guard" positions and continues: "The 'advance' and 'retire,' it is evident on anatomical grounds, can be made more rapidly in the French and with less expenditure of energy than in the Italian attitude. So, too, can recovery to the first position, with the heels aligned, or the extension forward as in the lunge." As far as rapidity is concerned, with the exception of the recovery to the first position (a movement of absolutely no importance), both theory and practice point to a conclusion exactly opposite to that which is evident to Mr. Dent. The feet being further separated and the knees more bent in the Italian than in the French position there is in the former as compared with the latter a stronger push being exerted in a direction forwards by the left and backwards by the right foot. By removing the resistance of the right foot as in the advance or the lunge, this stronger push from the left foot has immediate effect in producing a proportional rapidity of forward movement. So also in the "retire," the removal of the resistance of the left foot results in greater rapidity of movement backwards from the Italian than from the French attitude—an advantage well worth the extra effort entailed by the further separation of the feet. But more than this—the power, extent of reach, and rapidity of the lunge are enormously augmented by the simultaneous inclination of the body in the Italian system as compared with the French, in which the body is kept vertical. Mr. Dent, when dealing with this double movement, admits the greater power of thrust obtained by it; and though it is obviously a slip of the pen that makes him attribute to "On Guard's" letter in the *Broad Arrow* the statement that "in the Italian system there is only one (movement), that of the foot," his next sentence referring to the "extension of the arm in the French lunge" is most misleading, for in the system he advocates it is well laid down that the extension of the sword arm must always *precede* the lunge, so that the force and rapidity of the combined movements are lost in the French system.

With regard to the recovery from the lunge, Mr. Dent, in quoting part of "On Guard's" excellent account of the recovery, adds two words in brackets. By them he attributes to "On Guard" the statement that it is "the left" leg on which the strain of recovery falls; whereas it is almost entirely thrown on the *right* leg. He continues: "In recovery from the Italian lunge, the centre of gravity being thrown far forward, the trunk has first of all to be straightened on the legs—that is, to be brought to a more or less vertical position. This has to be effected by the gluteal muscles, which, again, owing to the attitude, act at a great mechanical disadvantage and therefore act only slowly." And further on: "The initial movement (of recovery) ..... must be slow and involve very powerful contraction of a single muscle to take place at all." Anyone reading these statements would naturally come to the conclusion that the swing backwards from the inclined to the vertical position was an extremely slow and an extremely weak one. Before accepting such a conclusion let him try the experiment. Let him assume the Italian and the French positions of the lunge, and recover to the "on guard" position in each respectively against the resistance, for example, of some one pulling him forwards by the right hand, or of a weight communicating with his right hand by a rope running over a bar or pulley. He will find that he is able by "the backward swing of the body" from the Italian position to raise a much greater weight, or a small weight with much greater velocity, than from the French position without the swing of the body. It is interesting to consider what are the forces at work in this recovery. If I understand Mr. Dent's letter correctly, he maintains that the recovery of the body to the vertical position is effected solely by the contraction of the gluteal muscle or muscles passing from the pelvis to the left femur, and the remaining part of the recovery by which the feet and body return to the position of on guard by the efforts of the left leg. Now if anyone will

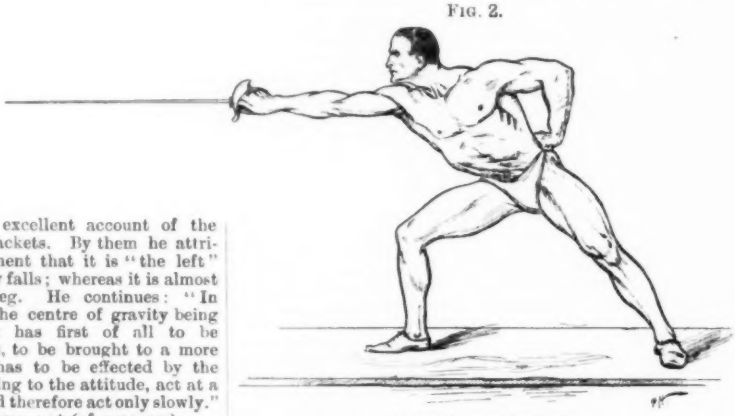
FIG. 1.



Italian "on guard" position.

assume the position of the Italian lunge and with his hand upon the left gluteal muscles will notice their condition while he swings the body from the inclined to the vertical position, he will perceive that they are wholly or comparatively quiescent. They can, no doubt, be contracted during the movement, but the movement is certainly not caused by their contraction, for it may be made without contracting them at all; for until the weight of the body

FIG. 2.



Italian "lunge" position.

is transferred from the right to the left leg, or partially so, the tendency of their action would be to raise the left foot from the ground. It is surely the hamstring and adductor muscles of the right leg which are effective in restoring the pelvis to the vertical position, acting on the shorter arm of a lever, of which the head of the right femur forms the fulcrum and the upper part of the pelvis and the vertebral column form the longer

arm. But the rapidity and force of the "backward swing of the body" (backward, that is, in the sense of being in the direction of the left foot, though in consequence of the feather edge position it is really a lateral swing to the left) are mainly effected by the muscles which bend the vertebral column itself to the left, especially the left erector spinæ and abdominal oblique. This lateral flexion of the vertebral column is a very strong movement, and by it the centre of gravity of the trunk from the pelvis upwards is raised and moved to the left.

No doubt the forces which effect the "backward swing of the body" throw additional strain on the quadriceps extensor of the right leg, on which also the chief strain of the remainder of the recovery from the Italian and of the whole recovery from the French lunge falls. This movement is common to the two recoveries and is effected by a push from the right foot backwards and upwards of the weight of the whole body. The push is mainly effected by the quadriceps extensor. But while in the French system the inertia of the weight of the trunk has to be overcome, this has been, or rather is, simultaneously being done by the erector spinæ, &c., in the Italian system. For this reason the recovery, as far as the upper part of the body is concerned, is quicker from the Italian than from the French lunge. In both cases the recovery must be slower than the lunge, for the weight of the body is raised in the recovery and lowered in the lunge. And masters of the art of fencing point out that safety from a riposte after the lunge depends more on the parry than on the recovery.

I have left unanswered that part of Mr. Dent's letter which refers to the position of the hands and arms, for a fair estimate of the rapidity and force with which any parry or cut can be executed requires a close and detailed explanation of each movement that effects it, and, as Mr. Dent does not give this, he does not show how his arguments apply to the Italian system. For instance, his statements about pronation and supination hardly concern the Italian system, where the parries are made from the shoulder-joint and supination is required in only one of them.

I am, Sirs, yours faithfully,

Blackwater, Hants, March 9th, 1836. E. D. RITCHIE.

"DEATH UNDER CHLOROFORM AT A DENTIST'S ROOMS."

To the Editors of THE LANCET.

SIRS,—Commenting in THE LANCET of December 8th, 1894, on a fatality from chloroform in a dentist's chair, I ventured emphatically to affirm that the cases of dental operation in which chloroform or ether could be considered indispensable were so rare that practically the use of these always dangerous agents in ordinary dental surgery was unjustifiable. I pointed out that nitrous oxide gas was *par excellence* the dental anæsthetic; that the cases in which it did not in every way suffice were highly exceptional; and I explained that much more could be done with it than seemed commonly supposed. The several deaths from chloroform during tooth extraction which have occurred since I expressed these opinions—opinions in entire accord with those you now put forth—have strengthened my conviction. I think this view will be supported by the bulk of dental surgeons as well as by the great majority of specialists in anæsthesia, and I believe they will go with me when I further declare that it is highly culpable to give chloroform in dental cases without clearly explaining to the patient or his friends the risk incurred, and that henceforth, after the warnings which have been lately published, administration of chloroform for tooth extraction in a dentist's chair—the most dangerous of positions—without every preliminary preparation and precaution usually taken in serious operations will, when death ensues, deserve a verdict of "Manslaughter" against the operator.

How serious is the mortality attending chloroform anæsthesia seems frequently forgotten. It is doubtful if that mortality has been decreased since, after collection of a great mass of statistics many years ago, Sir B. W. Richardson proved that deaths averaged not less than 1 in 4000 cases. Deaths continue to occur, and in the hands of highly skilled administrators, and as often as not in cases in which no organic disease is discoverable either during life or after death to account for the fatal issue. This is the practical fact, in spite of the teachings of Dr. Lawrie and of his strenuous contention—on which I express no opinion—that chloroform can be administered in every case with perfect safety. On the other hand, the mortality of nitrous oxide gas anæsthesia is so slight that the gas in skilled hands may be almost said to be perfectly safe. A few deaths have, it is true, taken place during its employment, but from these must be deducted a considerable proportion, not actually due to the effects of the gas, in which the operator, working by rule of thumb and knowing very little about the nature of complications likely to arise, has had no resource on appearance of untoward symptoms than to "run for the doctor," and the doctor on arrival has not infrequently found the patient dying or dead, perhaps with a foreign body in the glottis or suffering from some similar mishap which timely assistance might have averted. Deaths under gas do not commonly occur even from preventable accidents in the hands of ignorant operators; deaths from chloroform do frequently follow its use, even where the utmost vigilance and the highest skill are brought to bear. Whatever justification of its employment in other departments of minor surgery may be possible, chloroform is surely forbidden in the ordinary practice of dentistry.

I am, Sirs, yours faithfully,

Cavendish-square, W., March 23rd, 1896. HENRY SEWILL.

"DIRECT REPRESENTATION AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—The resolution reported by you in THE LANCET of March 14th as having been passed by the Council of the Royal College of Surgeons of England on the question of the representation of Members can hardly be said to reflect much credit on the collective intelligence of that august body. The Council is a standing example of the fact "that the union of capable persons is not always a sure guarantee of the definitive capability of the whole; by the union of persons of good sense it is possible to obtain an assembly which has no common sense." The resolution commences by taking for granted what is notoriously untrue—viz., that the Council represent the Members. Were this the case it is certainly the most curious kind of representation which was ever conceived; for not only have the Members no part in the election of their so-called representatives, but their proposals for the correction of this anomaly, which have been persistently pressed on the Council for twelve years past, have been until quite lately as persistently ignored by this truly representative body. As is generally known, the Council has at length submitted the chief of these proposals to a meeting of the Fellows, who were doubtless called to curse, but they remained to bless, and confirmed the principle of representation by an overwhelming majority. In this matter, therefore, the Council do not even represent their present constituents, the Fellows; they represent nobody but themselves. Since, moreover, it is notorious that there is now a strong minority on the Council in favour of this reform we may reasonably ask, How much longer is the opinion of a few ultra-conservative gentlemen to override that of the body corporate, whom they absurdly pretend to represent?—I remain, Sirs, faithfully yours,

March 16th, 1896. W. G. DICKINSON.

PREGNANCY AFTER VENTRO-FIXATION OF THE UTERUS.

To the Editors of THE LANCET.

SIRS,—The report of my remarks in the discussion of Mr. Mayo Robson's paper read at the last meeting of the British Gynæcological Society hardly expressed what I actually said. In Miländer's article[1] 74 cases of pregnancy after ventro-fixation are recorded. Of these, 8 were pregnant for the second and 3 for the third time. Of the 74 women, 63 were delivered, 10 still are pregnant, and 1 died from conditions apart from the operation or pregnancy. Of the 63 parturient women, 54 were confined at full term, 3 prematurely, and 6 aborted. My own cases referred to only include those reported at the annual meeting of the British Medical Association in 1893, and not as stated at the Gynæcological

[1] Zeitschrift für Geburtshülfe und Gynäkologie, Band 33, p. 464.

Society. Several other term pregnancies following ventrofixation may be found in current literature and some have not yet been published. As the discussion on Mr. Mayo Robson's excellent paper was adjourned I need not further detail these. One may, however, warrantably claim that a considerable number of women suffering from fixed retroflexion of the uterus have been not only relieved from all the attendant symptoms and disabilities, but have been restored to complete sexual health, permitting normal pregnancy, as the result of this conservative operation.

I am, Sirs, yours faithfully,

Grosvenor-street, W., March 23rd, 1896. LEITH NAPIER.

THE SCHOTT TREATMENT OF HEART DISEASE.

To the Editors of THE LANCET.

SIRS,—In common no doubt with many of your readers I have been greatly interested in the communications to your columns dealing with the Schott methods for the treatment of heart disease. I fear the cases and commentary communicated to THE LANCET of March 21st by Dr. Kingscote will hardly serve to dispel that absolute and obstinate incredulity of which he complains.

The impression conveyed from the brief account of the cases is that they might have improved considerably on quite ordinary lines of treatment. In most of the cases there is little evidence that the cardiac dilatation was due to organic valvular disease. We are not told that any of the patients had had acute rheumatism, and in no case is there mention of œdema, a symptom reasonably to be expected where failure of accommodation is at all extensive. Case 1 had albuminuria due, it was thought, to "defective circulation," a vague phrase, which might mean aortic disease or a tendency to chilblains. In this patient slight dilatation was detected with difficulty on one occasion and was promptly cured. In one case only a systolic bruit was noted. Are we to suppose that in the other cases auscultation revealed nothing abnormal? Percussion is the method of examination Dr. Kingscote mostly relies upon, and I fear he values this method far too highly, for he has seen a heart diminish its boundaries two inches in all directions in fifteen minutes. Would it not be safer to say that the area of cardiac dulness diminished?

I do not know whether the Roentgen rays have yet illumined the thorax, or whether the thoracic viscera could be so displayed, but pictures of such a heart, other than percussion charts, would be interesting. Dr. Kingscote tells us that the treatment acts by raising the blood-pressure in the arteries and so relieving the surcharged heart. If this be so it is difficult to understand why the treatment is of value in gout and chronic Bright's disease, where the hypertrophied heart dilates in consequence of the high arterial tension. I am, Sirs, yours faithfully,

Leicester, March 23rd, 1896. T. V. CROSBY, M.B. Lond.

"TORSION OF OVARIAN PEDICLE IN HERNIAL SAC."

To the Editors of THE LANCET.

SIRS,—I am interested to see that Mr. Owen has met with another case of hernia of the ovary with torsion of the pedicle. His case is similar to mine, except that the infant was eleven weeks old, whilst mine was six months. The brief record, to which Mr. Owen alludes, was merely an abstract of the paper which I read upon my case. I hope soon to put all the facts of this rare event on record.

I am, Sirs, yours truly,

C. B. LOCKWOOD.

Upper Berkeley-street, Portman-square, W., March 24th, 1896.

"THE CASE OF MR. LIONEL SMITH."

To the Editors of THE LANCET.

SIRS,—We beg to report that up to the present we have received the sum of £179 13*s.* 6*d.* on behalf of Mr. H. Lionel Smith. The amount is quite inadequate to meet the demands upon him for the support and education of his children, and his salary as district medical officer at Rorke's Drift is barely sufficient to provide for the needs of himself and wife. We need hardly recapitulate the harsh treatment that Mr. Lionel Smith received at the hands of the Government of Western Australia; how, on being unjustly dismissed from his post, he gained two actions against the Government; and how he was finally beaten on a technical point on appeal to the Privy Council after ruinous litigation. It is proposed to close the subscription list at the end of this month, but we hope that some others of your readers will even now come to the rescue of a man whose career has been blighted through no fault of his own.

We are, Sirs, yours faithfully,

JAMES F. GOODHART,
F. DE HAVILLAND HALL.

P.S.—We append a list of subscriptions recently received.

Mr. Launcelot Newton	£1	1	0
Dr. W. H. Brazil	2	2	0
C. E. C.	1	0	0

"SUBCUTANEOUS EMPHYSEMA OCCURRING DURING LABOUR."

To the Editors of THE LANCET.

SIRS,—This accident, referred to in THE LANCET of March 14th and 21st, is a somewhat rare one. I recollect when I was house surgeon of the Royal Maternity Hospital, Edinburgh, about 1874, attending a primipara in the hospital. No ergot was used and the labour did not appear unusually severe. I think the emphysema was not noticed till an hour or two after complete delivery, and it then extended over the face, neck, and thorax. It entirely subsided in three or four days. I showed the case to the late Dr. Alexander Keiller, lecturer on midwifery, &c., Surgeons' Hall, and honorary physician to the hospital, and although he had a very large experience I think he said he had never met such a case before. Since then I have never seen or heard of a similar case. I am, Sirs, yours truly,

R. MAXWELL MOFFAT, M.D., C.M. St. And.

Jersey, March 22nd, 1896.

POOR-LAW OFFICERS' SUPERANNUATION BILL.

To the Editors of THE LANCET.

SIRS,—I am a Poor-law medical officer for a district containing a poor population of 5000 scattered over an area of 15,000 acres, the nearest point being one mile and the furthest six miles. My pay averages about 9*d.* a visit and 6*d.* for a week's supply of medicine. The income-tax under Schedule E deducts 8*d.* in the pound and the proposed compulsory superannuation contribution will deduct another 6*d.* in the pound. I am forty-two years of age and, according to tables, my expectation of life is twenty-four years—i.e., I shall probably reach sixty-six. In return for this extra reduction of 6*d.* in the pound per annum for the next twenty-three years I have a chance of one year's pension, but if I die in the meanwhile what benefit shall I or my representatives derive from this deduction from my already inadequate pay? I am, Sirs, your obedient servant,

March 23rd, 1896. A COUNTRY PARISH DOCTOR.

"ASSISTANTS."

To the Editors of THE LANCET.

SIRS,—Perhaps your correspondent who describes himself as "A Sorely-tried Principal," and who has chosen to publicly vilify those of his professional colleagues who may be (through no fault of their own) unable to acquire practices of their own, forgets that there is another side to the shield. What of principals who are petty snobs and tyrants? What of those who meanly grind their assistants down to starvation wages? What of those who invariably get rid of a man if he bids fair to become more popular than his principal? What of the man who, fixed in the therapeutical traditions of his perhaps long-past student days, scouts modern notions as unpractical and new-fangled, himself an inveterate *laudator temporis acti?* However, it would be as absurd to say that all principals come under the above heads as it would be to suppose that the thirteen assistants of your correspondent are a fair sample of their class, or, indeed,

are evidence of anything much else than an extraordinary lack of judgment on his part in choosing such specimens. Nor can I agree with "A Sorely-tried Principal" that the only remedy is to put assistants entirely at the mercy of their last principal's caprice.

I am, Sirs, yours truly,

ONE WHO HAS BEEN BOTH ASSISTANT AND PRINCIPAL.

March 24th, 1896.

To the Editors of THE LANCET.

SIRS,—If the letter by "A Sorely-tried Principal" in THE LANCET of March 21st will be the means of eliciting replies from other principals I hope it may also be the means of giving expression to the views of assistants "sorely tried" or otherwise. A history of an assistant's experience of thirteen principals extending over a period of ten years—if such an one is possible—would be interesting, to say nothing else, to the profession and public at large, and would further enable them to judge impartially as to which of the parties are being so sorely tried in this vale of tears. My point is that there are satisfactory, very satisfactory, and most unsatisfactory principals as well as assistants, and almost all the charges—happily the list is not a long one: intemperance, sexual incontinence, pugilistic proclivities, idleness, ignorance, lapses of memory, and bad language in public—brought against that estimable and unoffending class can with equal justice be laid at the doors of principals. Is it needful or necessary to adduce unpleasant statistics? It is not to be disputed that principals have more to lose than assistants in indulging in irregular conduct of any sort, and it is this position of greater freedom and less responsibility which partly explains, to my way of thinking, the erratic and eccentric behaviour of many of that brotherhood. But, given a genial and most pleasant of principals, an assistant has often—more often than not—to encounter the prejudice of patients, who regard him as a less experienced and skilful practitioner, which in the large majority of cases he unquestionably is. Of course, neither the public nor the principal can be exactly blamed for this; all the same, it adds one more burden to the load he carries, and this is a consideration which principals seldom, if ever, sufficiently regard. "A Sorely-tried Principal" has long disregarded excellent testimonials, but he is sure the only safeguard is a reference from the last principal. It is not easy to draw a distinction between a *reference* and a *testimonial*. If a reference is not a testimonial what else it can be it is difficult to imagine, unless that a reference is addressed in the first person and a testimonial in the third person constitutes an essential and eternal distinction. The chances of any error creeping in apply to both, and so long as human nature is what it is testimonials and references will every now and then mislead and miscarry. A reference *is* a testimonial and a testimonial *is* a reference, and nothing whatever is gained by maligning the one and glorifying the other.

I am, Sirs, yours truly,

March 23rd, 1896. POLLUX.

PUERPERAL FEVER.

To the Editors of THE LANCET.

SIRS,—So long as pathogenic bacteria had not been recognised as the essential cause of fevers and communicable diseases (the essential cause, though perhaps requiring for their activity other and accidental conditions), the term "specific" was applied to these diseases rather as a figure of speech than as the expression of a scientific fact, and was intended rather to emphasise the remarkable uniformity of character than as involving any theory of the origin of infectious diseases. It was, therefore, without any inconsistency that a specific disease might be held to be set up by a plurality or diversity of causes, material or other, physical or moral, be communicated by direct infection, "caused" by insanitary surroundings as such or induced by fright, grief, or other emotion. We no longer believe in the "spontaneous origin" or "transmutation" of specific diseases—of small-pox arising suddenly from the mere sight of a case, or of scarlet fever "turning into" diphtheria; but it must be confessed that the retention in ordinary language of, and the sanction given by Act of Parliament to, the expression "puerperal fever" have greatly tended to perpetuate the old confused conception of the nature of the diseases incidental to the puerperal state. Puerperal fever was, I may say is, by many looked upon as a "specific" infectious disease arising from a multiplicity of different causes, including direct communication, various septic infections, mental emotion, and the occurrence of other specific diseases during, or soon after, childbirth. The strangest result of this confusion of thought and language is that when described as "septicæmia" or "puerperal septicæmia," the only strictly scientific definition of the disease, it ceases to be notifiable; and its existence may remain unknown to the medical officer of health until the death certificate comes in course of time under his notice, the infection having in the meanwhile been carried by the nurse or doctor to her next case. "Puerperal fever" is not, as the term is vulgarly used, an entity like scarlet fever, but includes a number of communicable and specific diseases having one circumstance or accident in common—viz., that the patient happens to be a parturient woman. Such persons are, for obvious reasons—the unusual facilities for absorption presented by the condition of the uterine cavity and vagina and the manipulations to which they are subject, the degree to which the blood is laden with effete matter from the involution of the uterine tissue rendering elimination less rapid, &c.—peculiarly susceptible to septic poisoning and feebly resistant to all forms of infection. The microbes of septicæmia must, of course, be derived from the outer world, but the putrescent matter serving as a vehicle or nidus may be introduced from without, as on the hands or instruments of the attendant or effluvia in the house, or may be provided by the putrefying discharges, retained membranes, or clots; and all such cases should be described and notified as puerperal septicæmia, not implying that they differ in any essential respect from surgical or other septicæmias, but in order to apprise the medical officer of health and other responsible parties of the special danger incurred by the attendance of the medical practitioner or nurse on other women in a like position. Parturient women are not less liable to infection by the true specific diseases—erysipelas, diphtheria, scarlet fever, small-pox, &c.—than the non-parturient, and are, indeed, more susceptible thereto. These diseases may assume a somewhat different character in consequence of the patient's condition, and may even tend to be accompanied by septic complications; still, they are none the less erysipelas, diphtheria, &c., and should not be indiscriminately described as forms of puerperal fever, but clearly distinguished from cases of septicæmia in which fibrinous exudations appear on the labial and vaginal mucous membranes, and even on the tonsils, though the resemblance to diphtheria is only superficial and accidental. To these cases since the introduction of the bacteriological diagnosis Widal has specially called attention, but in the *Zeitschrift für Geburtshülfe und Gynäkologie*[1] Bumm reports one of a woman who was delivered of twins by a medical man who was at the same time in attendance on children in the neighbourhood suffering from diphtheria. Three days later she had rigors and fever, followed by the formation of diphtheritic false membranes about the labia and vagina, and at the end of another week false membranes appeared in the throat and nose. Löffler's bacilli were present in large numbers in the vaginal membrane, but streptococci were absent. She recovered under the use of stimulants and three injections of antitoxin, each of which was followed by a fall of the temperature and general improvement.

I am, Sirs, yours obediently,

FITZ-EDWARD.

[1] Band xxxiii., Heft 1, 1895.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The District Provident Society.

THE Manchester District Provident and Charity Organisation Society held its sixty-third annual meeting recently and the audience listened to—what is somewhat rare just now—a tolerably cheerful report. It stated that the position of the society was satisfactory except as regards the sick fund, on which an unusual strain was put in the early part of last year; for the severe and long-continued frost caused much distress which led to some relaxation

of the rules. During that period 2053 families were relieved at a cost of £743 10*s.*, and a large quantity of bedding and clothing was given away. The ordinary work of the society consists chiefly in dealing with distress from the sickness of the wage-earners or bread-winners, and relief may take various forms—e.g., a few weeks' help in money or food, a grant of bedding or warm clothing, a "recommend" for medical treatment, and the benefits to be derived from a stay at a convalescent home or other institution suitable to the case, the purchase of tools or stock-in-trade, the payment of club arrears, or of fares to other towns where employment is promised. Situations are not infrequently found for those out of work, and the society is also useful in making inquiries as to the history of people seeking relief from private persons. By its help many imposters are exposed, and many worthy people receive help. It coöperates, moreover, with the guardians of the poor and with the managers of the medical and other charities, and does much to prevent abuse of charity. During last year more than 56,000 cases of this kind were dealt with. The society has also a hospital at Southport for convalescents, and in addition it helps about forty old people, whose average age is seventy-one, with small pensions of 2*s.* 6*d.* or 3*s.* a week. The chairman appealed for more funds for this purpose. So far its objects seem to be altogether good. It seeks to help the deserving poor, "to prevent destitution and to arrest the descent of people into the ranks of pauperism, rather than to interfere with the work of the Poor-law authorities." The fact that the society works for the prevention of pauperism by helping the deserving ought to insure a good share of public support, but, as the chairman said, "popular sympathy seemed to run too far in the direction of the less deserving poor." It is evident that much good may be said for this society, but opinions may differ with regard to the merits of one of its offshoots. Some twenty-five years ago it originated the provident dispensary movement in Manchester. In theory it promised well and seemed likely to solve the question of the medical care of the poor above the rank of paupers. But from one cause or another abuses crept in which have led to its interfering unfairly and injuriously with many of the general practitioners, and to its originating a new variety of the abuse of charity by not sufficiently safeguarding the dispensaries against the admission of those who cannot reasonably claim a title to their benefits. This matter excites much interest in Manchester, and the ultimate issue will not be clear till all ranks of the profession are united.

The Manchester Medical Society: Professor Schuster on the Roentgen Rays.

A special meeting of the Manchester Medical Society was held on Wednesday evening last in the chemical theatre at Owens College to hear an address by Professor Schuster on the Medical and Surgical Aspects of Roentgen's discovery. After explaining the process and mentioning the present limitations of its utility he suggested that the work should be carried on in some systematic way. He thought that in a year or so every hospital should have the means of taking these photographs, and recommended that rooms should be taken in some convenient locality fitted up with all the apparatus necessary and put in charge of a properly qualified assistant, who would take photographs of all cases brought to him.

Owens College.

Mr. John Robinson, who has on previous occasions been a generous benefactor of the College, has just sent a donation of £500 to the treasurer to be applied towards the extinction of the debt on the new buildings of the medical school. At its last meeting the Senate appointed Mr. J. H. Ashworth, B.Sc., a former student of the college, junior demonstrator in Zoology.

Decrease in Attendance at Board Schools.

It was reported at the last monthly meeting of the Manchester School Board that there was a decrease in the number of children on the books compared with the corresponding period of last year of 2352. It was accounted for by the closing of six of the schools during the month by order of the medical officer of health on account of the prevalence of measles and whooping-cough.

Night Parade of Medical Staff Corps.

On Saturday week the second company of the Manchester Volunteer Medical Staff Corps held a night parade under the command of Surgeon-Captain Renshaw, for the purpose of instruction in searching for wounded by night. The company marched to Old Trafford accompanied by one of their ambulance waggons and a store cart. Patients were distributed about a field, and the company told off into bearers and dressing station party. The former sought for wounded with the aid of lanterns, a collecting station being formed. The dressing station party, under the command of Surgeon-Captain Fairclough, adjutant to the corps, pitched a dressing tent and prepared to build field kitchens for the patients brought in. After all the wounded had been attended to, the tent was struck, stores packed, and the company returned to headquarters, where they were dismissed. This parade, said to be the first of its kind in this part of the country, was originated by Surgeon-Captain Renshaw, and its novelty as well as the completeness of the arrangements, made it very popular among the men, who have gained some practical knowledge of the kind of work that might be required on active service.

March 24th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Honorary Degrees.

THE Senatus of Edinburgh University has resolved to confer the honorary degree of LL.D. upon Sir J. Russell Reynolds, Bart., M.D. Lond., President of the Royal College of Physicians of London (as announced in your previous issue), and on Dr. Argyll Robertson, surgeon oculist to the Queen in Scotland and lately lecturer on Ophthalmology in the University.

Medical Education of Women in Edinburgh.

Save at the colleges for the medical education of women the end of the winter session was unmarked by any outstanding function. At both the colleges for women this prosaic method of bringing the session to an end was not followed. Under the Scottish Association for the Medical Education of Women the students and their friends met in the Medical College for Women, Minto House, Chambers-street, when Sir Alexander Christison presided and Sir William Muir, the genial principal of the University, presented medals, prizes, and certificates to the successful students. At the close of the proceedings Sir William Muir, in wishing the students god-speed in their work, expressed his great gratification at the success which had attended the medical education of women in Edinburgh and elsewhere. He also stated that it had given him great pleasure to be able to report to the University Court that they had such excellent accommodation in their new premises, which he considered unexceptionable and of the highest character. At the Surgeons'-square School the students were addressed by a lady medical missionary from China, who laid great stress upon the importance of thoroughly equipping themselves for medical work in foreign lands as well as at home.

Appointment to the Prisons Board for Scotland.

The Secretary for Scotland has appointed Dr. Thomas R. Fraser, Professor of Materia Medica in the University of Edinburgh, to be medical officer to Her Majesty's Prison Board for Scotland, in succession to Sir Douglas Maclagan, who recently resigned. It was hoped in some quarters that the Secretary for Scotland might have given this appointment to one of the younger and less busy members of the profession in Edinburgh, but, of course, no exception can otherwise be taken to the appointment.

British Institute of Public Health.

The annual congress of the institute is to be held this year in Glasgow. The meetings are to extend from July 23rd to the 28th, and the university authorities have granted the use of the college buildings for the purposes of the congress. The work is to be conducted in three sections—viz.: (1) Preventive Medicine; (2) Chemistry and Engineering in their Relation to Public Health; and (3) Municipal and Parliamentary. The following are some of the subjects suggested for discussion:—Construction, equipment, and management of hospitals for the treatment of infectious diseases, treatment of outbreaks of infectious diseases, influence of elementary schools upon the spread of infectious

diseases, bacteriological investigations, country sanitary administration, treatment of sewage, river pollution, Sale of Food and Drugs Acts, &c. The institute is to be entertained by the Corporation of Glasgow, and the Lord Provost, Sir James Bell, Bart., is to preside at the meetings of the congress. It is intended, too, that the members shall be shown the various municipal works and that excursions to places of interest shall be arranged. The Lord Provost has issued a circular to various medical corporations and public health authorities, inviting them to appoint delegates to the congress, and a highly successful meeting is confidently anticipated.

Paisley Victoria Eye Infirmary.

The annual meeting of the subscribers was held on the 10th inst. Dr. Cluckie, the surgeon to the infirmary, reported that 2971 patients had been under treatment during the year, of whom 2921 were dismissed "cured"; there were 103 cases of cataract. The treasurer's report indicated a small balance in favour of the institution.

Glasgow University.

The winter session for the classes in the Faculty of Medicine closed on the 20th inst. During the present week the professional examinations are being held. The results will be announced on the evening of the 28th inst. The session at the extra-mural schools is to be continued for another week, the schools being rather later in commencing than the university session. Professor Joseph Coats, M.D. Glasg., has been re-elected Vice-President of the Students' University Union. The new President is Mr. W. Craig Henderson. Professor McCall Anderson has undertaken to conduct a special class for practical instruction in Diseases of the Skin for the students of Queen Margaret College. The class will meet during the summer session at the Hospital for Skin Diseases, Elmbank-street. Mr. Stanley Muir, B.Sc., has resigned his appointment as Senior Demonstrator of Chemistry in the University in order to act as chemical expert in connexion with a gold extracting process in Denver. He is to be succeeded by Mr. Wm. R. Lang, B.Sc. Another of the younger "dons" who has been attracted across the Atlantic is Mr. R. M. Wenley, D.Sc., who has been appointed Professor of Moral Philosophy in the University of Michigan. Principal Caird has been laid aside by illness during the last three weeks, but he is now improving, and will, it is hoped, shortly be able to return to his official duties.

The Schaw Convalescent Home.

The new convalescent home, the gift of Miss Schaw to the Glasgow Royal Infirmary, was formally handed over to the directors on the 21st inst. Mr. Warren, who represented Miss Schaw, requested the directors to accept the building and to use it as a convalescent home for patients who could be discharged from the infirmary wards. He also intimated that Miss Schaw, in addition to the £40,000, the original cost of the home, wished to give a further sum of £7000 to form the nucleus of an endowment fund. The Lord Provost, Sir James Bell, Bart., on behalf of the directors, expressed his appreciation of the valuable gift and pointed out the great service the home would render as an adjunct to the infirmary. Speeches were also delivered by Mr. Hugh Brown, the chairman of the house committee, and by the Rev. Dr. Donald Macleod. The home is pleasantly situated in the village of Bearsden, about three miles from the city; the railway makes it easy of access.

New Hospital for Rothesay.

It has been decided to erect a cottage hospital in Rothesay, and a site has been obtained for the purpose from the Marquis of Bute. The expense, it is hoped, will not exceed £2000.

Gaelic Society of Glasgow.

At the annual dinner of the society on the 20th inst. the chair was taken by Dr. Campbell Black, whilst the toast of "The Medical Profession," proposed by Professor Jones of the University, was responded to by Dr. Cumming Grant.

Glasgow Medico-Chirurgical Society.

At a meeting of this society on the 20th inst., the President, Dr. W. L. Reid, delivered an address on the History, Forms, and Theories of the Vaginal Speculum. Dr. Reid traced the existence of the speculum in some of the earliest medical writings and discussed the various modifications which it had undergone down to the present day. The address was illustrated by a large number of lantern views and by the exhibition of various forms of specula showing the character the instrument has assumed in the different phases of its evolution. A vote of thanks was heartily accorded to Dr. Reid on the motion of Dr. H. C. Cameron.

Hospital Sunday Fund, Glasgow.

The sum collected for this year amounts to £4069, an increase of £428 on the previous year. At the annual meeting on the 17th inst. one of the clerical speakers, referring to the fact that some churches failed to make a collection on Hospital Sunday, made the suggestion that the Lord Provost should issue a notice requesting Christian people not to attend these churches on that day. This is a new proposal for the practice of boycotting.

Low Death-rate at Paisley.

In the report of the medical officer for the week ending the 16th inst. the death-rate for the borough was reported as 12·9 per 1000, whilst the rate in the corresponding week last year was 41·4 per 1000.

Aberdeen Police and Railway Ambulance Classes.

On Monday night the medals and certificates gained in connexion with the police and railway ambulance classes conducted by Dr. J. Scott Riddell, were awarded. Mr. Duguid, station master, Joint Passenger Station, presided, and Bailie Taylor made the presentations. Of fifty-four who attended examination, two gained silver medals, six got bronze medals, and thirty-four secured certificates. Chief Constable Wyness then presented the lecturer with a valuable microscope and case.

Proposed Destruction of Houses in Harris.

In the House of Commons on March 17th the Lord Advocate, replying to Mr. E. B. Baillie, said that the condition of the crofters' and cotters' houses in the Island of Harris had been reported to the Secretary for Scotland, but he does not at present propose to take any action.

March 24th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Pensions for Poor-law Medical Officers.

THE Bill to render compulsory the payment of superannuation pensions to Poor-law officials, which was introduced in the House of Commons on the 18th inst., and commented upon in your columns last week, will have solid Irish support. In reply to a statement of Mr. H. Plunket, that there was a general desire among Irish Poor-law officers to have the benefit of the Bill, it was intimated that there would be no difficulty about including Ireland under its operation, Mr. Chaplin stating that if it met with the approval of the Irish members the Government would raise no objection. This invitation to Irishmen to support the measure was responded to by Mr. Johnston and Sergeant Hemphill as well as by Mr. Lecky. The Bill was ultimately read a second time and referred to the Standing Committee. An agitation in favour of the compulsory payment of pensions to Poor-law medical officers in Ireland has long been maintained. The opportunity has apparently come at last for medical men connected with the Poor-law to join their brethren in England and obtain redress of a long recognised and sorely felt grievance.

The late John St. Claire Gunning, L.R.C.P. Edin., L.R.C.S.I.

I regret very much to have to announce the death of Mr. Gunning, which took place at his residence, Enniskillen, on March 17th. He had been in failing health for a considerable time, and was obliged to resign his appointment as medical officer to the Enniskillen Union Workhouse and assistant surgeon to the County Fermanagh Infirmary in the beginning of this year. In the former institution he had introduced many improvements in the interest of the poor. Mr. Gunning was a man of the very greatest popularity, and for a lengthened time he enjoyed the principal practice in Enniskillen, and it was owing to the constant strain of hard work that his health some years ago began to yield and that the nervous symptoms which culminated in paralysis set in. The deepest regret is felt in Enniskillen at Mr. Gunning's death, as he and his family had been so long connected with the place, and personally he was beloved by all sections of

the community. Mr. Gunning was buried on March 19th in his native place, Enniskillen.

The Detention of Lunatics in Workhouses.

At an inquest held on March 20th in reference to the death of a female lunatic in the Belfast workhouse the coroner, in summing up, stated that the case showed a series of gross illegalities. In the first place the woman was sent very properly to the district asylum as a dangerous lunatic on the certificate of a medical man sworn before two magistrates. After being there two years she was removed to the workhouse, to which it was never contemplated at any time that dangerous lunatics should be sent. There she was kept seven years, every hour of which she had been illegally detained. It was, the coroner said, illegal to send her to the workhouse and it was more illegal still to apply restraint, because they had no power in the workhouse to take that course. Further, while in the district asylum half the cost of her maintenance was borne by the Consolidated Fund, but the moment she was illegally transferred to the workhouse she became chargeable to the ratepayers, and for the past seven years they had been keeping the woman in the workhouse and paying for that illegality £70. The jury found that the woman died from nervous exhaustion in the lunatic department of the union workhouse (Belfast). They strongly protested against the illegal system herein disclosed of a dangerous lunatic like the deceased being transferred from the district asylum to the workhouse, which was never intended for the detention or treatment of such persons, and they requested the coroner to forward a copy of this verdict to the Local Government Board, the Chief Secretary for Ireland, and the guardians.

Death of Edward Ashley Spiller, M.D. R.U.I., Surg. R.N.

Great regret was felt amongst Dr. Spiller's numerous patients in Belfast when it was announced that he had died at Haslar Hospital, Gosport, on March 23rd. The son of a well-known Belfast man, Dr. Spiller was educated at Queen's College, Belfast, and graduated M.D. of the Royal University in 1885. He soon after entered the Royal Navy, and during the greater part of the time since he has served abroad. Dr. Spiller had been for some time in poor health, and only a few weeks ago, in returning from Belfast to Haslar, he caught cold, and this brought on a relapse of intermittent pneumonia, from which he died. Dr. Spiller was personally very popular, and the utmost sympathy is felt for his bereaved relatives.

"Home, Sweet Home."

At Belfast on March 31st, at eight o'clock, Mr. W. Kaye Parry will deliver a lecture in the Ulster Minor Hall on the "Seamy Side of Home, Sweet Home." The Lord Mayor of Belfast will take the chair and the lecture will be illustrated with lantern slides. Reference will be made to the efforts of the Plumbers' Company to improve the plumbing trade and to the registration movement.

March 24th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Precautions against the Introduction of Tuberculosis into France.

A DECREE signed on the 14th inst. renders compulsory the submission to the tuberculin test of all bovine animals imported into France from foreign countries. Those arriving are therefore detained at the frontier for forty-eight hours in order that the test may be applied. In those cases where the characteristic reactions denoting the existence of a tuberculous process are revealed the incriminated animals are, after being marked, refused entrance into the country unless the owner gives his consent to immediate slaughter. The tuberculin test is not applied to cattle which are formally declared to be imported for slaughtering purposes. In these cases, however, proof must be forthcoming within fourteen days that the beasts have been killed.

A Centenary Celebration.

On Saturday last, the 21st inst., the members of the Société de Médecine de Paris met at their rooms in the Rue de l'Abbaye to celebrate the hundredth anniversary of the foundation of their corporation. Originally christened the Société de Santé, it is claimed for this association that it has done more to raise the status of the profession in France and to combat quackery than any other society. Dr. Durozier gave a historical *résumé* of the society, and then Dr. Motet read an elaborate eulogy of the distinguished neurologist, Duchenne of Boulogne, to whose clinical acumen and indomitable perseverance we owe the recognition as pathological entities of such diseases as locomotor ataxy, progressive muscular atrophy, &c. I remember how the late regretted Professor Ball used to recall the spectacle of Duchenne—an unknown practitioner with no status whatever in the faculty—visiting patient after patient in the wards of the general hospitals, collecting materials for the magnificent legacy he was destined to bequeath to suffering humanity. The centenary celebration culminated on the 22nd inst. in a banquet, at which England—or should I say Scotland?—was represented by Dr. Ogilvie, who appears to have made a "hit" when he remarked that the land o' cakes had never made war against France. A good deal of *chauvinisme* seems to have found vent at this banquet, for the favourite of the gathering was the private physician of the Prince of Oldenburg, who, according to the *Temps*, "a su, en quelques paroles, porter au plus haut point l'émotion patriotique de l'assemblée." Dr. Viger, Minister of Agriculture, acted as chairman of the banquet.

Tuberculous Parrots.

A few weeks ago MM. Cadiot, Gilbert, and Roger submitted to the consideration of the Société de Biologie certain researches in proof of the human origin of tuberculosis as seen so frequently in parrots. The most frequent lesions are tumours of the skin and mucous orifices (eyelids, nostrils, commissure of the beak, tongue, &c.). Since the parrot enjoys in these latitudes few opportunities of coming in contact with other birds, and as his chief companion is man, it became an interesting problem to solve whether the disease was gallinaceous or human tuberculosis. The above-mentioned authorities pronounced in favour of the human origin of the disease, relying on experiments which are sufficiently conclusive. Almost synchronously with these experiments Professor Strauss of Paris had the opportunity of making a post-mortem examination of two parrots who had succumbed to tuberculosis and of which one had been reared by a person who had also died from phthisis. The bacilli collected at these necropsies when inoculated into the guinea-pig, the fowl, and the dog provoked in these animals the same lesions and symptoms as human bacilli (Koch's). Those ladies who deem life worthless without the society of a parrot would do well, then, to reject "pollies" that present suspicious excrescences about the beak, eyelids, head, &c. Such birds should be killed without delay, for they might very well be the means of disseminating a disease which is already but too common as a plague of humanity. That domesticated birds other than parrots can communicate tuberculosis to their human friends would seem to be amply proved by the observation related quite recently to the Société de Biologie by Dr. Durante. A woman aged seventy-one years had a lupoid growth of the second phalanx of the thumb, the result of a violent peck given by a tame sparrow. The family history was good as regarded tuberculosis. The bird had been ill for some time and ultimately died from an unknown disease. Besides the digital lesion subcutaneous secondary growths were discovered in the forearm and elbow of the patient. These were removed and inoculated into a guinea-pig. Sections of the nodules showed typical tubercles of the areolar tissue, but it was found impossible to stain the bacilli. The inoculated guinea pig died from generalised tuberculosis. Its spleen was inoculated into (*a*) a pigeon, which, killed a month later, was found to be healthy; and (*b*) a rabbit which examined post mortem, also a month later, presented tubercles in all its viscera.

The Probable Income of the Future French Universities.

The *Bulletin Médical* of the 18th inst. states that should the receipts of the different Faculties remain stationary, these same Faculties, transformed into universities as they will be shortly, will possess the following incomes:—

	Francs per annum.		Francs per annum.
Paris	646,000	Nancy	41,000
Dijon	131,000	Rennes	27,000
Lyons	128,000	Aix	26,000
Bordeaux	105,000	Poitiers	20,000
Montpellier	85,000	Caen	19,000
Lille	83,000	Grenoble	16,000
Toulouse	42,000		

It will be seen that several of these incomes are slender indeed, and it is evident that some of the university towns will have to provide further funds unless they wish to court educational failure and ultimate disaster.

Dr. Brouardel, Professor of Legal Medicine at, and Dean of, the Paris Faculty, has been reappointed for a further term of three years to the latter responsible post.

March 24th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The German Balneological Association.

THE annual meeting of the German Balneological Association was opened on Feb. 6th in Berlin, Professor Liebreich presiding. At the first sitting Dr. Schuster (Aix-la-Chapelle) read a paper on the Treatment of Chronic Myelitis by Hot Baths, a method long used by the Japanese medical men and introduced into Europe by Professor Baeltz of Tokio in Japan. Dr. Schuster has seen an obvious decrease of the paralyses and the subjective symptoms when this method was employed. Professor Winternitz of Vienna said that he also preferred hot baths to tepid ones in diseases of the central nervous system, but the number of cases treated was too small to justify a decided opinion on the efficacy of the treatment. Dr. Marcus of Pyrmont discussed the etiology of Hemicrania, a disease which is, according to him, dependent on the weather and usually makes itself felt when the atmospheric pressure becomes variable. A continuous pressure, whether high or low, does not produce attacks, but they begin at once whenever a change of weather is imminent. Dr. Marcus, who is himself a sufferer from hemicrania, said that he is able from his bodily sensations to predict alterations of the weather. The good effects of travelling or change of residence are also founded on climatic influence.

The German Surgical Association.

The twenty-fifth annual meeting of the German Surgical Association will be held this year from May 27th to 30th, the usual date being the week after Easter, and there will be a preliminary conversazione on the evening of May 26th in the recreation-hall of the Reichstagsgebunde. At the first sitting Professor Esmarch will read a paper on the Value of Artificial Anæmia in the Surgery of the Extremities. Papers will also be read by Professor Bruns on the Modern Treatment of Enlargement of the Thyroid Gland, by Professor Koenig on Local Tuberculosis, and by Professor Wölfler on Intestinal Surgery. The proceedings will terminate with a garden party given by the Berlin Surgical Society at the garden belonging to the well-known Kron-Theater.

The Psychiatrical and Neurological Society of Berlin.

At an ordinary meeting of this society, held on March 9th, Dr. Köppen showed a man affected with what has been termed "Gedankenlautwerden." This is a state of mind where the patients hear their thoughts repeated before giving verbal utterance to them, and in the act of writing they seem to hear someone dictating to them.

Compulsory Vaccination.

In the Imperial Diet the introducers of a proposal that compulsory vaccination should be abolished have met with a decided check, State-Secretary von Boetticher, who replied on behalf of the Government, having called attention to the beneficial effects of compulsory vaccination in the German army.

A Medical Peerage.

Professor Leyden has received a title of nobility.

March 23rd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Butcher's Bill in Abyssinia.

WE have now a fairly complete account of the losses sustained by the Italian troops on the disastrous day of Abba Carima. There took part in that engagement five generals, of whom two were killed (Da Bormida and Arimondi), one was taken prisoner (Albertone), and two returned to headquarters (Baratieri and Ellena). Of the seven colonels engaged, two were killed (Airaghi and Romero), one is a prisoner (Nava), and four have returned (Valenzano, Brusati, Stevani, and Ragni). The commanding officers of battalions (*comandanti di battaglioni*) were twenty-four in number, and of these fifteen are dead and one (Gamerra) is a prisoner. The total of Italians who went into action was 9000, of whom only 3000 have returned many of them wounded, while not more than 400 are prisoners; 5600 Italians were left dead or severely wounded on the battlefield. With the 4400 native troops similarly accounted for, the loss in actually killed out of the total of white and black regiments engaged can be little under 10,000 men.

The Medical Officers Engaged.

Much comment has been evoked by the silence in which the services of the army medical staff at Abba Carima were passed over in the eulogies pronounced in the Chamber of Deputies over the fallen of that day. "Tutti fecero il loro dovere" (all did their duty) said the Minister of War, but a word of recognition was certainly due to the surgeons who succumbed under fire in the discharge of their professional office. The Italian artillery, mostly served by the Messina regiment, did deadly execution in the enemies' ranks and the men remained at their guns even when the Abyssinians had come to close quarters and the fight was prolonged hand to hand. The conduct of the medical corps during this heroic episode of the day was, by the testimony of the surviving combatant arm, beyond praise, their services to the wounded under extreme personal danger having been continued up to the last. It is estimated that fifty army surgeons were killed or left for dead on the field, and some reference to the fact, it is urged, was assuredly to be expected from the parliamentary eulogists of the soldiery. This is not the first time (it is a military critic who reminds me) that the brave conduct of the Italian medico-military arm has been ignored in Abyssinian warfare. Captain Gasparri, a Roman graduate of medicine, fell gloriously at Dogali nine years ago when relieving the wounded under fire, and in the same battle Lieutenant Ferretto, also on the medical staff, was killed in the discharge of his duty. Rather more than two years ago, at Coatit, the heroism of the surgeons was conspicuous, and in December last, at Amba Alagi, as recorded in THE LANCET, young Dr. Jacopetti, after doing his best and last for the wounded, met his fate not far from Major Toselli, who commanded the ill-starred column, savagely stoned to death by the victorious Abyssinians. Yet but for the press, it is indignantly remarked, not one of these gallant medical officers would ever have been signalised to their countrymen by anything that was written or spoken, officially or in Parliament, by the panegyrists of the Italian troops.

The Health of the Pope.

His Holiness has had a recurrence of the unfavourable symptoms culminating in the prolonged syncope to which I referred a fortnight ago. His nights have been disturbed by insomnia, leaving him in the morning so unrefreshed as to render advisable the suspension of the out-door exercise he had been taking every afternoon in the Vatican gardens. He has also had to be more sparing than is his wont in giving audiences, except on occasions of prime necessity or to those immediately associated with him in the transaction of business. His body physician, the Commendatore Dr. Lapponi, is in attendance, at least for the present, morning and evening.

The Red Cross Service at Abba Carima.

Five mountain ambulances were engaged in this sanguinary conflict and included Ambulance No. 2 under Dr. Mazzioli, No. 3 under Dr. Spinedi, No. 5 under Dr. Viscardi, No. 6 under Dr. Caccini, and No. 7 under Dr. Bordano. Nos. 2 and 3 were on the field of battle and had to be abandoned in the confusion of the Italian rout, all their *matériel* and baggage falling into the hands of the enemy, the ambulances themselves being overturned and only part of the *personnel* succeeding, with great difficulty, in making good an escape to Adi Ugry. Nos. 5 and 6 had to fall back on Adi Caie and are by this time, it is believed, at Massowah. Of No. 7 it is known that it picked up 200 wounded, among whom were General Ellena and sixteen officers. It reached Massowah, after a five days' perilous journey, with a small residue of provisions and with a handful of mules laden with wounded. Its *personnel* was but scantily provided with escort and so was obliged to pursue its march by night in order to lessen the

probabilities of its being assailed by King Menelik's troops. General Lamberti speaks highly of the skill and courage with which its retreat was conducted, while every possible care was bestowed on the wounded. At Adi Ugry the Red Cross Infirmary under the charge of Dr. De Castro had picked up and placed under treatment more than three hundred wounded. This was on the 3rd inst., about forty-eight hours after the Italian defeat when the roads were thronged with stragglers, many of them in the last extremity from exhaustion or hæmorrhage. Dr. De Castro had met them *en route*, chiefly at Adigualà. The mountain hospital No. 29 established at Asmara has trebled the number of its outposts for the wounded, carrying the number of these stations up to 150. It is now reinforced by another mountain hospital (No. 28) which can accommodate another 150 patients. We are still without news of the mountain ambulances, Nos. 8 and 9, which set out on the 9th inst. for the Abyssinian camp to attend to the Italian wounded.

Dr. Baccelli.

Dr. Baccelli, who filled with such acceptance the post of Minister of Public Instruction in the late Cabinet, has now resumed the chair of clinical medicine, with which he has been so long and so honourably associated, in the Roman University. Primary, secondary, and academic education will undoubtedly lose by this step; but clinical teaching will no less undoubtedly gain.

March 21st.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Cholera News.

THERE has been only one new case of cholera during March in Alexandria, but during the month of February there were 16 admissions into hospital, of which 10 resulted in death. There were also 33 deaths in private houses, giving a total of 49 new cases in twenty-nine days. The disease has been since January entirely confined to Alexandria and to the lowest quarters of that town. The cases increased in number a fortnight ago, but this was apparently due to the fact that a number of young medical men were sent there who, by a house-to-house visitation, brought to light a few cases which would perhaps not otherwise have been reported. Mr. Innes, who is working at cholera in the bacteriological laboratory at Alexandria, has contracted a slight attack of the disease. Professor Koch, who is now in Upper Egypt, has suggested, it is understood, that a modification of Dr. Haffkine's virus should be manufactured and employed at Alexandria. Quarantine is still imposed against Egypt by Greece and Turkey including Palestine. This disadvantage, coupled with the unsatisfactory state of the Turkish dominions, is impelling the English and American visitors every week towards Italy and France.

Imported Measles.

Two young women this winter on two different ships have developed measles on their journey from London to Egypt. In each case the disease spread to fellow passengers during the incubation period, and these in their turn infected others before the appearance of the rash, and one patient already travelling for his health died partly from this complication. Since the disease reached Cairo there have been a few cases among the English residents, a few in the children at the barracks, and again a few among natives in two villages in the Delta. In Cairo the infectious hospital accommodation has proved of great service and the Government disinfecting apparatus is every month becoming more useful.

Luxor Hospital for Egyptians.

A new report has just been issued of this hospital, which was opened by the late Khedive in January, 1891. The hospital is not supported by the Government, but is dependent upon the subscriptions of visitors to Luxor and Assouan, Mr. John Cook supplying every year the necessary deficit. There are twenty-six beds open all the year round, and the total number of in-patients last year was 297, of whom only three paid anything for their maintenance. During the year 6431 out-patients were treated, including 1068 women; and it is well to note that the bulk of the out-patients come in the summer months when the English physician is absent. This serves to show that a good native medical man can command a certain popularity. Some of the surgical cases included gunshot wounds caused by shot or slugs from muzzle-loaders, and contusions from the heavy iron-shod sticks carried by peasants. There were ten cases of vesical calculus in patients under ten years of age. About half the medical cases were suffering from ankylostomiasis. One patient was a merchant in Khartoum during the siege and had received terrible injuries from the Mahdists. Amongst other wounds he lost one eye from a sword cut, had a bullet in the cheek breaking the malar bone, had his throat cut from side to side, the trachea being severed, had one shoulder-joint opened by a sword, one lung and several ribs injured by another bullet, one hand fractured by a part of a shell, and other lesser injuries. He was thrown outside the walls as dead, but lived to return to his home in Naples and then to come to Luxor on account of bronchitis. To show that the hospital finances are well watched I may mention that a liberal diet is given to in-patients for the daily sum of 4*d*. per head. The medical staff consists of Mr. Longmore and Muhammad Effendi el Hakeem.

Cairo, March 4th.

MEDICAL TRIAL.

QUEEN'S BENCH DIVISION, HIGH COURT OF JUSTICE.

(Before Mr. Justice HAWKINS.)

KITSON *v.* PLAYFAIR AND WIFE.

THIS was an action brought by Mrs. Arthur Kitson against Dr. W. S. Playfair and his wife for alleged libel and slander.

Mr. Lawson Walton, Q.C., and Mr. Tindal Atkinson appeared for the plaintiff; Sir F. Lockwood, Q.C., M.P., and Mr. C. W. Mathews for the defendants. At the commencement of the case Mr. Justice Hawkins suggested that as the matter would be an exceedingly painful one to everybody concerned, the advisability of trying it in private. After consultation between counsel it was decided to try the case in public, Mr. Walton stating that his client was anxious to face a trial in open court. The statement of claim set out that the defendants had charged plaintiff with unchastity. Defendants denied publication of the slander and pleaded privilege.

Mr. Lawson Walton, in his opening statement, said that the case was one which presented many painful features. It was an action by a married lady, who sought to escape from a charge which reflected upon her honour. The plaintiff complained that after she had placed herself under the professional care of the defendant not only did he draw an erroneous inference from her symptoms, but he also broke the solemn seal of professional confidence by betraying to a third person knowledge which he had gained, and made a charge against the plaintiff that she had been guilty of adultery. The defendants did not now make the suggestion that plaintiff had committed adultery, for no plea of justification had been set up, but the defendants had pleaded that the communications complained of were privileged. The answer to that plea would be that no privilege could attach to statements made by a medical man as to matters which came to his knowledge in his professional capacity. Any information which a medical man thus received ought to be absolutely secret. Mrs. Kitson was an Australian lady, the wife of Mr. Arthur Kitson, a brother of Sir James Kitson; and Mrs. Playfair, the wife of Dr. Playfair, was sister to Sir James Kitson and Mr. Arthur Kitson. Dr. Playfair was the well-known obstetric physician in the West-End. Mr. Arthur Kitson had acted as his father's agent in Australia, and he there married the plaintiff, who was his equal in social position. For certain reasons Mr. Kitson's agency terminated, and Sir James Kitson allowed Mr. Kitson £500 a year. The plaintiff resided with her husband in Australia, and they had two children, but the plaintiff had great maternal troubles. Towards the end of 1892 the plaintiff came to England, her husband remaining in Australia. Shortly before she left Australia Mrs. Kitson had some maternal trouble, and was very ill during the voyage, although she was not attended by any medical man. When she arrived in this country she was still suffering from certain symptoms, she was met by a lady deputed by Sir James Kitson who was to find her accommodation, and after that she resided partly in London and partly at one or two places in the provinces. Whilst visiting some members of the Kitson family in Yorkshire, towards the end of 1893, the lady's sufferings increased, reaching an acute stage later, when she consulted a Dr. Williams. Dr. Williams formed the opinion that she was suffering from an affection of the womb, but he was not quite clear as to what it was. Dr. Playfair's name came up, and she mentioned that Dr. Playfair was her brother-in-law, when Dr. Williams suggested that he should be called in. He came and examined her condition, and expressed the opinion that her illness was a grave one. On Feb. 23rd, 1894, she was placed under chloroform, and an examination was made. As she was regaining consciousness she heard the end of a remark of Dr. Playfair's—"Well, it is very like it: I do not know anything about her. She may have been up to some pranks." She was again put under chloroform. When she came to the second time Dr. Playfair had gone. She wrote to Dr. Playfair asking for an explanation of his remark and protesting her innocence. She entreated Dr. Playfair not to pronounce an opinion adverse to her until her husband had come home. Dr. Playfair replied that it would be advisable for her to make her illness an excuse for leaving London, otherwise he should be bound to tell his wife the conclusions which he had arrived at. The plaintiff again wrote saying that she was at present unable to clear herself, but "the right person was the cause." Dr. Playfair, in reply, said that the only way for her to clear herself was by showing that her husband had been in England within three months.

In the course of Dr. Playfair's attendance upon plaintiff, said counsel, he had drawn moral inferences and had assumed the position of a moral inquisitor. Why was he to violate the sacred obligation that was placed upon a medical man, and that for reasons purely personal? The obligations of truth were relative and not absolute. Dr. Johnson, the greatest moralist of all time, had said that if a man were asked by a would-be murderer which way his victim had gone it would be that man's duty to direct him wrongly. Cardinal Newman himself had said that there were circumstances in which it would be right to resort to falsehood. This lady was placed in the position that if she did not say that her husband had been in this country within a certain time her honour was gone, and under physical suffering in the interests of herself and children she resorted to evasion. On March 11th she wrote: "How am I to act? I am bound by my oath. Ought I to break it to you, and would you let it rest only with you?" To this Dr. Playfair replied that he could not be satisfied with vague and wild talk about oaths, &c., and that if it was not at once proved to him that her husband had been in England he would inform his wife and let her act as she pleased. He would only advise her to keep the facts to herself and do nothing. He would use his own discretion as to what use he should make of the knowledge that her husband had been in England. In her next letter she said, "I regret the tone you use about oaths. When a man is in hiding and flying from justice and you are the only human being who he knows will strain every nerve to save and shield him and who is anxious that his people shall never know and binds you to keep faith, you are apt to do many things that people whose lives run smoothly would never dream of." She again protested her innocence, and said she could account for every moment of her time "except the evening she spent with a broken-hearted sailor," and added that she would send Dr. Playfair's letter to her husband. To this Dr. Playfair replied that he would postpone speaking to his wife to give her an opportunity of answering his question in a plain, straightforward manner. Further correspondence followed, and on March 15th the plaintiff telegraphed, "Am I too late to say yes?" Dr. Playfair, however, had told his wife, and he wrote to say that it was now her husband's duty to clear his wife of the inevitable suspicion which his surreptitiously coming to London had caused. Mrs. Playfair wrote to Sir James Kitson, and he wrote to the plaintiff that if she remained in England the allowance which he had made to her would be discontinued, but if she returned to Australia he would make her an allowance. This offer she refused, and she sent to her husband to ask him to come to England. In September, 1894, Mr. Arthur Kitson arrived in England, and he at once wrote to Dr. Playfair and avowed his intention of taking the part of "as good, true, and honourable a woman as it had ever been his lot to deal with, be the others whom they may." In the correspondence which ensued Mr. Kitson supported the suggestion that Mr. Kitson had visited England unknown to his relatives, and further suggested that Dr. Playfair might have made a mistake with regard to his wife's symptoms. Dr. Playfair replied that the facts were simply these. He was called professionally to see Mrs. Kitson, and found her suffering in a manner that it was impossible that it could have been of a legitimate character, her husband being in Australia. He had pressed her over and over again to say if Mr. Kitson had been in London, and could never get a plain answer. Under these circumstances he had communicated the matter to his wife, and he believed that she had communicated it to James and to nobody else. The husband inquired by whom the medical man was called in to attend his wife, and if by herself was it not a strong argument to show that she had nothing to fear. He also said that he had it on the highest medical authority that a mistake might have arisen, and why not give the patient the benefit of the doubt, at least for a time. Dr. Playfair replied that he did not remember whether he was called in by Mrs. Kitson or by her medical man. In this case no mistake was possible even to the least experienced, but he submitted the matter to an expert and his report was most conclusive. The learned counsel contended that there was a mistake by Dr. Playfair, and that this mistake had inflicted upon the plaintiff the most hideous consequences. The case was no doubt exceptional, but it was not without precedent. Dr. Playfair might, upon reflection, have some doubt in his mind; he might have said that he had made a mistake. If he said this now the case need not last a moment longer.

Mrs. Arthur Kitson, called and sworn, said in answer to Mr. Lawson Walton that she resided at 29, Perham-road, West Kensington, with her husband. She was English by birth, but had lived in Australia. She married Mr. Arthur Kitson on Aug. 4th, 1881, in Australia. The defendant, Emily Playfair, was her husband's sister. Her first child was born on June 2nd, 1882, and she had considerable trouble in connexion with the birth of that child. Her second child was born on May 11th, 1884, after which she was in very bad health, and was attended by several medical men for uterine affections. After this she had several miscarriages. She left Australia in 1892. About the end of September that year, and before leaving for England in October, she had suffered from a miscarriage. She had no medical attendance on that occasion. She last saw her husband about the end of September. On the voyage the state of her health was very low. She arrived in England on Dec. 2nd, 1892, and went to live at Margaret-street, Cavendish-square. She afterwards, on the suggestion of her husband's family, went to live at Bournemouth. While there she was attended by a medical man. She remained at Bournemouth about six months, and afterwards went to live at Longridge-road, South Kensington, where she remained, with the exception of time spent in visiting members of her husband's family in Yorkshire, till the end of November. She continued to suffer from ill-health. She then went to live at 8, Russell-road, South Kensington, and afterwards at Almaterrace and Allan-street. At the beginning of January, 1894, she became very ill and sent for Dr. Muzio Williams, who examined her thoroughly, and told her she was in a very bad state indeed, and that she did not understand how ill she really was. It was Dr. Williams who first suggested that Dr. Playfair should be sent for. The latter saw her first about the middle of January. He examined her, and said it was an aggravated case of influenza, and that she should be sent to a home or have a nurse to attend her. When Dr. Williams went out of the room Dr. Playfair said he was very sorry to see her in such a low state, and asked her what was worrying her, to which she replied that she was worrying about Arthur. He said, "Why?" She said, "He is in a dreadful state through not getting his money, and he says he is starving." He replied, "Let him. He allowed you to starve. It is the best thing that could happen." She said, "Oh, doctor, I can't do that. If they would only send his money in time it would be all right. He says if he does not get his money he will have to blow his brains out." Dr. Playfair then said, "You must try and get well and take care of yourself for the sake of your children." Dr. Williams then came in. Witness told Dr. Playfair that she did not see how she could manage about the children if she went to a home. During the time of this conversation she felt lightheaded. She did not see Dr. Playfair again till the day of the operation on Feb. 23rd. Prior to this she was very ill and lost blood to an excessive degree. Dr. Playfair said it would be necessary to examine her under chloroform. This was administered. On recovering consciousness witness heard Dr. Playfair say, "I don't know what else it can be. I know very little about her. She may have been playing hanky-panky." Dr. Williams said, "I do not think it can be anything like that. She has submitted to every examination and been perfectly candid." Witness said she then struggled up and said, "Oh, Dr. Playfair, for God's sake let me go now if you think there is anything wrong." He then patted her and said, "There, there, my dear, it's all right. We think it is a cancerous growth." He said to Dr. Williams "Give her some more." Dr. Williams then dabbed the handkerchief or whatever it was on her face and she lost consciousness. When she recovered consciousness Dr. Playfair had gone. She subsequently wrote to her husband at different addresses in Australia telling him of Dr. Playfair's accusation.

Mr. Lawson Walton then examined the witness with regard to the letters that had passed between herself and Mrs. Playfair. Continuing his examination, Mr. Walton asked her if there was a word of truth in the accusation that during the year 1893 she was ever untrue to her husband. Witness: Not one word.

Cross-examined by Sir Frank Lockwood: She said that she had communicated her intention to come to England to her husband's family before she started. She was very kindly received by Mrs. Playfair and the whole of her family and became intimate with them. Her husband provided nothing towards her support in England. The allowance made by Sir James Kitson was when she came to England reduced to £400 a year. On Feb. 23rd chloroform was administered to her more than once. When she said to Dr. Playfair that he had better let her go she meant that he had better let her die. Sir Frank Lockwood: What did you think Dr. Playfair was referring to? I thought he was suggesting some dreadful disease. In re-examination, the witness believed she suffered from a miscarriage before leaving Australia. No medical man attended me.

Dr. Herbert Spencer, Professor of Midwifery at University College and Obstetric Physician to University College Hospital, called and sworn, said he had made an extensive study of the condition of pregnancy and conditions of the growth and morbid expulsion of the fœtus in the results of conception. He had been in court and heard the symptoms described by Mrs. Kitson, in consequence of which she underwent the operation on Feb. 23rd, 1894. He had examined her on two occasions, on March 10th and March 12th of this year. He had also examined the body produced to him as being the body or part of the body removed from Mrs. Kitson. It was shown to him and to his colleague, Mr. A. J. Pepper, at a solicitor's office. Dr. Hugh Playfair and the defendant's solicitor were present. In his opinion it was consistent with legitimate conception from her husband that the substance produced should have been removed from the lady on Feb. 23rd after the lapse of time which she stated had occurred since she saw her husband in October, 1892. If required he was prepared to justify his answer upon his general knowledge and reading, but not upon general observation.

Mr. Lawson Walton: Are you familiar with the professional rules obtaining in your profession? Yes.—Is there any rule in your profession with regard to the confidences subsisting between a patient and the medical adviser in relation to knowledge acquired in the course of professional attendance? There is such a rule.

Mr. Justice Hawkins: Is it a written rule? The Witness: It is a generally understood rule.

Continuing, witness said that the rule was that information obtained during professional attendance should be considered confidential. There were exceptions. For instance, in a case where if a medical man did not divulge a professional secret he would make himself an accessory to a crime. In a court of law, also, he would be bound under oath to divulge professional secrets.

Cross-examined by Sir Frank Lockwood, witness said he took it that this rule should guide an honourable professional man in any profession. He did not suggest that Dr. Playfair was not an honourable man. He thought that gentleman was quite as capable as himself in forming an opinion as to what he should or should not do in a case. In his own practice he had never met with a case of such a lapse of time. The longest time he had read of a placenta being retained was eighteen months. The case was quoted from Dr. Charpentier. In his own practice the longest retention he had known was six months. He did not think the condition of the placenta would obviously show the length of time it had been retained. The fact that it had been retained for twelve months would probably be shewn, but not necessarily. After eighteen months' retention it would probably exhibit the fact in a greater degree. To extract a placenta that had been retained for say twelve months, he was of opinion that it would generally be necessary to dilate the orifice artificially. He would not expect this to be necessary if the placenta was the result of a three months' conception. The condition of the mouth of the womb did not afford reliable information under all circumstances. He was not able to form an estimate of the time that the substance shown him as being removed from Mrs. Kitson on Feb. 23rd had been retained in the womb.

(To be continued.)

[The case, which has occupied the attention of Mr. Justice Hawkins and a special jury since Friday, March 20th, was not concluded at the time of our going to press. Subsequently to the proceedings reported above several medical witnesses, including the defendant Dr. Playfair, Dr. Muzio Williams, Dr. Hugh Playfair, Mr. Bland Sutton, Sir John Williams, Sir Wm. Broadbent, Dr. Champneys, and Sir Wm. Priestley, gave evidence, which we do not report this week, thinking it better to present the medical details to our readers complete, with the verdict in the case.]

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the undermentioned subjects:—

Surgery.—F. L. Angior, Liverpool; H. Clapham, Sheffield; R. Goulden, Manchester and Middlesex; A. J. Hayes, Middlesex; T. Jones, Manchester; C. H. Nicholson, Middlesex; W. A. Pierce, Liverpool; and W. J. Woodman, St. Mary's.

Medicine, Forensic Medicine, and Midwifery.—E. C. Hope, Melbourne and University College; S. Langton, St. Mary's; and J. Winder, St. Mary's.

Medicine and Midwifery.—A. Hilton, Manchester; and J. M. A. Lamb, London.

Forensic Medicine and Midwifery.—W. O. Piper, Westminster.

Medicine and Forensic Medicine.—F. L. Angior, Liverpool; and P. C. Higgins, Guy's.

Medicine.—H. H. Monckton, King's College; A. Robinson, Leeds; D. D. Stewart, Liverpool; T. W. Waken, Charing-cross; and W. B. Welch, St. Bartholomew's.

Forensic Medicine.—R. Goulden, Manchester and Middlesex.

Midwifery.—D. A. Main, Belfast; and S. E. H. Martin, Royal Free.

To Messrs. Goulden, Jones, Lamb, Stewart, Welch, and Winder was granted the diploma of the society entitling them to practise Medicine, Surgery, and Midwifery.

CONJOINT EXAMINATIONS IN IRELAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS: STATE MEDICINE.—The following candidates have obtained the Diploma in State Medicine of these Colleges:—Edward Bowmaker, M.B., B.S. Durh., and Sydney Calvin Smith, M.R.C.S. Eng., L.S.A.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bahia:* Dr. Carlos de Vasconcellos of Rio de Janeiro has been appointed Professor of Clinical Midwifery and Gynæcology, in succession to Dr. A. R Lima.—*Berlin:* Dr. Nasse (first assistant of Professor von Bergmann), Dr. Koeppen (first assistant of Professor Jolly), and Dr. Thierfelder have been promoted to Extraordinary Professorships of Neurology, Surgery, and Bacteriology respectively.—*Christiania:* Dr. H. Ström has been appointed Lecturer in Surgical Pediatrics.—*Göttingen:* Dr. Sultan has been recognised as *privat-docent* in Surgery.—*Kharkoff:* Dr. A. I. Ivanoff of Jurieff (Dorpat) has been recognised as *privat-docent* in Midwifery and Gynæcology.—*Madrid:* Dr. L. Guedea y Calvo of Saragossa has been appointed Professor of Clinical Surgery.—*Marburg:* Dr. A. Barth has been promoted to an Extraordinary Professorship of Surgery.—*Munich:* Dr. Fritz Lange has been recognised as *privat-docent* in Surgery.—*Rio de Janeiro:* Dr. A. Rodiguez Lima of Bahia has been appointed Professor of Clinical Midwifery and Gynæcology.—*Strassburg:* Dr. A. Siegert has been recognised as *privat-docent* in Children's Diseases.

THE DEVONSHIRE HOSPITAL AND BUXTON BATH CHARITY, BUXTON, DERBYSHIRE.—From the annual report of this hospital for 1895 it appears that of the 2562 cases under treatment in the hospital in the last year 2238 were cases of a rheumatic or gouty character; 680 of these cases were complicated with some form or degree of heart disease. The large proportion of 1413 were cases of chronic rheumatism, 80 subacute rheumatism, 567 rheumatoid arthritis, 86 gout, and 90 sciatica. In addition to the cases of heart disease mentioned above 163 cases of other disease were complicated in a similar manner. There is also a short supplementary medical report detailing the statistics of cases of rheumatism, rheumatoid arthritis, gout, and sciatica admitted during the year. This is a valuable addition by the resident medical officers, Dr. Ernest A. Dent and Dr. Alexander Whytt, calculated in time to give a very valuable table of reference on these diseases. For instance, in polyarticular rheumatoid arthritis, of which there were 447 cases, the males formed 22 per cent. and the females 78 per cent. There was a family history of rheumatoid arthritis in 4 per cent., of rheumatism in 35 per cent., of phthisis in 15 per cent., and of rheumatism in 23 per cent. As regards age, in 1·5 per cent. the disease appeared between the ages of one and ten years, in 3 per cent. males and 1 per cent. females; between the ages of ten and twenty years in 13·5 per cent., males 23 per cent., females 11 per cent.; and between the ages of twenty and thirty in 20 per cent., males 15 per cent., females 21 per cent. Valvular heart disease was found in 36 per cent., whilst in gout it was discovered in 23 per cent.

SUPERANNUATION GRANT.—Mr. Robert Fendick, M.R.C.S. Eng., has been granted an annual superannuation allowance of £70 on his retiring from the medical officership of the No. 3 District, Bristol.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced: Dr. Lafont, Member of the French Lower House of Parliament for the Basses-Pyrénées.—Dr. Borelli, Lecturer on Medicine in the University of Naples.—Dr. Armstrong, Professor of Anatomy and of Clinical Surgery in the Atalanta Medical College.—Dr. Laughton McFarlane, Professor of Clinical Surgery in the University of Toronto.

THE BARKER ANATOMICAL PRIZES FOR 1896.—The Royal College of Surgeons in Ireland offer for competition two prizes of £26 5s. each, which are open to any student whose name is on the Anatomical Class List of any School in the United Kingdom. The preparations entered must be placed in charge of the Curator before June 1st, 1896. One prize will be allotted to a dissection showing the relations of the pleura, pericardium, and lungs to the anterior chest-wall, the dissection to be planned with special reference to the operation of tapping or incising and draining the pericardium for pyocarditis, and the other will be allotted to a dissection displaying the surgical relations of the lateral sinus, the mastoidal antrum, and the semicircular canals as exhibited by a dissection through the bones from without, with the view of illustrating operations in the middle ear and lateral sinus. For particulars application should be made to the Curator of the Museums.

PRESENTATIONS TO MEDICAL MEN.—Mr. Henry C. Crew, L.S.A., has been the recipient, from the members of the Wednesbury Centre of the St. John Ambulance Association, of a meerschaum pipe for his services as instructor on ambulance aid.—Mr. Andrew Browne, L.R.C.P. Edin., L.F.P.S. Glasg., has been presented with a handsome inkstand by the members of the Bradford Corps of the St. John Ambulance Brigade for his instruction to the corps on first aid.—Mr. Edward Dodd, M.R.C.S. Eng., has received from the members and friends of the Slough Hearts of Oak Medical Fund a handsome dinner gong, mounted on buffalo horns, bearing the following inscription: "Presented to Mr. E. Dodd by the members and friends of the Slough Hearts of Oak Medical Fund on his retirement, March, 1896."—Dr. J. H. Rowe of Burnley has been presented by the St. John Ambulance Corps, West-end Division, with group photographs of the A and B Sections, suitably framed, in recognition of his valuable services on First Aid.—Mr. C. J. Jacomb-Hood, L.R.C.P. Lond., M.R.C.S., of Brighton, who has filled the post of honorary medical officer to the Jewish Convalescent Home in St. Patrick's-road, Hove, since its foundation five years ago, has been the recipient from the members of the local and parent committees of a handsome silver bowl and a pair of silver candlesticks, in testimony of their appreciation of his services to the institution.—Dr. H. E. Daniell of Chertsey, Surrey, has been presented by the members of the Chertsey ambulance class in connexion with the St. John Ambulance Association with a handsome clock for his instruction on First Aid.—Dr. Arthur Court of Staveley, Chesterfield, on the recent occasion of presenting the certificates to the successful members of the Staveley Town, Manchester, Sheffield, and Lincolnshire traffic department ambulance class, was the recipient of a valuable writing desk bearing the following inscription: "Presented to Dr. A. Court by the members of the Staveley Town, Manchester, Sheffield, and Lincolnshire traffic department ambulance class, 1896." Accompanying the present was an address as follows: "The members of this class respectfully beg to tender you their sincere thanks for the tuition which they have received during the past twelve months, and in grateful recognition of your generous and kindly services ask you to accept the accompanying writing desk. At the same time they express an earnest wish for your continued and deserved prosperity." Signed on behalf of the members, R. Hunt, jun., secretary.—Mr. Charles J. Perrott, L.R.C.P., L.R.C.S. Irel., on the occasion of his relinquishing the position of medical officer at the City Workhouse, Fishponds, Bristol, has been the recipient from the officers of a handsome silver liquor stand, suitably inscribed, as a token of their esteem and appreciation of the uniform kindness and courtesy he has shown to them.

A CONCERT, under the immediate patronage of their Royal Highnesses the Prince and Princess of Wales and other members of the Royal Family, is to be given at the Queen's Hall on June 11th in aid of the Ladies' Association Endowment Fund, Great Northern Central Hospital.

DR. ANGUS MACKINTOSH has been elected by the Rural District Council of Chesterfield permanent medical officer of health for the Union. Dr. Mackintosh is thus paid a well-deserved compliment, for he has been their officer for nearly a quarter of a century.

DIPHTHERIA IN LONDON.—Since the end of the first week of February the deaths from diphtheria registered in London have shown a considerable fall in numbers. The 63 deaths of that week have yielded to totals which until last week never exceeded 48. Last week the total was 52, and was 23 in excess of the corrected decennial average for the twelfth week of the period 1886-95. Of the 52 deaths, 6 belonged respectively to St. Pancras, Islington, and Camberwell. All save one were in young persons aged under twenty years and 33 in children from one to five years of age. The admissions to hospital were 117, as compared with 97, 70, and 102 in earlier weeks. The patients remaining in hospital on Saturday last were 706 in number, as compared with 661 and 713 on the corresponding Saturdays of January and February. In Greater London the deaths were 8, occurring in Acton, Willesden, Stratford, Hornsey, and Tottenham districts. Here, then, we find during several weeks past a declination of fatal diphtheria in the metropolis, and yet a death-roll which is none the less above the decennial average.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Mr. David Guillan of Tayport has bequeathed £2000 to the Dundee Convalescent Home.—Mr. Joseph Freeman, late of Radnor-place, Gloucester-square, Hyde Park, has bequeathed £250 to St. Mary's Hospital, Paddington, and £100 to Westminster Hospital.—The late Alderman William Bindloss of Kendal has bequeathed £1000 each to St. George's Hospital, Hyde Park-corner, King's College Hospital, London, and Middlesex Hospital.—By the will of the late Lieutenant-Colonel Mitford of Mitford, Northumberland, £100 are bequeathed to each of the following institutions—namely, St. Mary's Hospital, Paddington, Samaritan Free Hospital for Women and Children, Royal Free Hospital, Gray's-inn-road, Cancer Hospital, Brompton, and the Hospital for Consumption and Diseases of the Chest, Brompton.—The late Mr. Frank E. Hills of Penshurst, Kent, has bequeathed £1000 each to Poplar Hospital and Tunbridge General Hospital.—Mr. George Richmond has contributed £1000 to St. Thomas's Hospital to endow a surgical bed as a memorial of James Richmond.—The executors of the late Mrs. Baker of Bromsgrove, have made a grant of £7000 to the Bridgnorth and South Shropshire Infirmary.—The Worshipful Goldsmiths' Company has made the following grants—namely, £250 in aid of the funds of the Metropolitan Convalescent Institution, Walton-on-Thames, Broadstairs, and Bexhill-on-Sea; £250 each to King's College Hospital, London, the Royal London Ophthalmic Hospital, Moorfields, and Charing-Cross Hospital, London; and £100 to the Dental Hospital of London.—The late Sir Julian Goldsmid, Bart., M.P., has bequeathed £2000 each to University College Hospital and the Royal Free Hospital, £1000 each to the Jews' Hospital, Lower Norwood, and the Metropolitan Free Hospital, and £500 each to the Brompton Consumption Hospital, Tunbridge Wells Infirmary, and the Sussex County Hospital.—The following donations have been received by the committee of the North-West London Hospital, Kentish-town-road, in response to Lord Rathmore's appeal—namely, £100 from the Right Hon. Lord Iveagh and £50 from Mrs. Mary Mensbier.—The executors of the late Mr. David James have made a grant of £450 to the National Hospital for Consumption, Ventnor, Isle of Wight.—Mrs. Fish has contributed £1000 to the Westminster Hospital, Broad Sanctuary, in memory of her late husband Mr. Charles Fish.—Mrs. James Packs has sent a donation of £500 to the Middlesex Hospital.—The Merchant Taylors' Company has voted 50 guineas to Charing-cross Hospital, London.—Mr. Thomas Martin, of Beechwood, Withdeane, Brighton, has presented £100 to the Western Branch Fund of the Brighton and Preston Dispensary, and £50 to the Sussex Eye Hospital.—From an anonymous donor the treasurer of Guy's Hospital has received £1000 for the re-endowment fund.

THE BUDAPEST EXHIBITION.—For the convenience of medical men visiting the exhibition, which will open on May 1st, 1896, arrangements have been made by the Proprietor of the Franz Josef Spring to place at their disposal a special room, to which letters and telegrams may be addressed, and in which every convenience for correspondence will be provided free of charge. There will be a supply of medical and balneological literature and guide books and the telephone will be at the disposal of visitors. Letters may be addressed Franz Josef Spring in Budapest.

THE STRANGERS' HOSPITAL, RIO DE JANEIRO.—We have just received the annual reports of the Strangers' Hospital, Rio de Janeiro, for the years ending June 30th, 1894 and 1895 respectively. During the half-year ending Dec. 31st, 1893, there were only 25 patients admitted, but from January to the end of June, 1894, the great amount of sickness prevailing in the port, aggravated as it was by the exigencies of the revolution, taxed the capacity both of the hospital and of its staff almost beyond due limit. In this period 172 patients were admitted, of whom 149 had yellow fever. There were 53 deaths, including 45 from yellow fever, 2 from pernicious malaria, 2 from tetanus, and 1 each from heart disease, enteric fever, disease of the kidney, and gangrene of the pharynx. From July 1st, 1894, to June 30th, 1895, there were 104 patients admitted, with 13 deaths, 9 of which were due to yellow fever. The matron and three of the nurses were attacked with yellow fever, which, unfortunately, proved fatal to one of the nurses (Miss Clayton). The hospital was founded with the object of providing prompt and skilled attendance for a limited group of English and American subscribers, their families and employés, in times of illness, especially during the recurring epidemics of yellow fever, but it has now acquired more of a public character than was originally intended.

THE DIFFUSION OF SMALL-POX.—There was last week a slight increase in the number of admissions of small-pox cases to hospital in London as compared with the week preceding. Last week the admissions were 9, and in the week preceding only 4 in number, 1 and 13 being the totals of the two prior weeks. The patients remaining under treatment on Saturday last were 43 in number, and only 1 in addition to those of the previous Saturday. In the corresponding weeks of January and February the cases in hospital had been 73 and 58 respectively. No death from the disease was registered last week, the deaths in the course of the twelve weeks of the present year having been only 5 in all, these having taken place in the second and tenth weeks. No death took place in any of the suburban districts of Greater London last week. For the rest of the kingdom, the chief centre of small-pox prevalence during last week was again in Gloucester and in the towns and districts surrounding that unhappy city. In the week ended March 12th the new cases notified had been 138, and in the next succeeding seven days the fresh attacks reached the total of 117, the deaths were 19, and the discharges from the hospital only 1. Nor is this the worst, as later information reaches us to the effect that new cases are now arising at the rate of 43 daily. The President of the Local Government Board stated in the House of Commons last week that of the first 495 cases occurring, there had at that time been only 100 recoveries, meaning we presume by that that convalescence had been established, that 300 patients were still under treatment, and that 93 deaths had been chronicled, a per case mortality at that moment of over 18 per cent. It would have added much to the value of the statement had the cases and deaths been classified according as the sufferers were vaccinated, unvaccinated, or revaccinated. How far the present epidemic may still extend it would be unwise to predict, though anti-vaccinators, in a hurry to arrive at deductions favourable to their dangerous theses, would have us draw conclusions on a total of attacks estimated by themselves. Certain it is that there is plenty of material capable of feeding the disease in the city in the shape of unvaccinated members of the community. For ten years the Vaccination Laws have been virtually a dead letter in the city, the guardians having as far back as 1887 given up the previous plan of proceeding against defaulters under Acts relating to infantile vaccination. That the present deplorable state of the town is to a large extent due to this neglect on their part cannot, we imagine, be gainsaid, the idle talk about sewer air, insanitary areas,

and the like, notwithstanding. As recently as Saturday last a meeting of anti-vaccinators was held at the Albert Hall, Gloucester, a unanimous vote being passed in favour of a continuance of neglect of vaccination and calling upon the city guardians to vote against the proposed motion to rescind the former resolution of the guardians withholding all proceedings against defaulters. However, we are glad to be able to state that wise counsels prevailed at the meeting of the guardians on Monday last, and that a resolution in favour of the enforcement of the compulsory clauses of the Vaccination Acts was passed by a majority of 9 in a board voting to the number of 53. Already a good deal of vaccination and revaccination had been performed, though but little in comparison with what remains to be accomplished. The town council have not been slow to do all in their power to get this prophylactic favourably recognised by the public, and had they been charged with its enforcement, probably much would have been done ere now. Employers of labour have been circularised, the medical men of the town have been called in council, and other steps taken to safeguard the health of the people against the disease. The guardians have contributed £150 towards the carrying on of the work of the District Nursing Society, which has to deal with an ever increasing number of home-treated patients ill from small-pox. The epidemic seems to have now got beyond the controlling power of isolation in hospital, and reliance must be in no mean degree now placed on the measure of success which shall speedily follow the resolution of the guardians to enforce vaccination. A meeting of the medical officers around Bristol has been held at the instigation of Dr. Davies, the medical officer of Bristol, and the risk has been considered that small pox may break out in any of the districts represented, and it was decided that unanimity of action should be agreed on. The death of a child from small-pox has been reported at Leonard Stanley, in the Stroud rural district, the patient coming from Gloucester. As a precautionary measure a hospital is to be erected at Tewkesbury. At South Corney, near Cirencester, the small-pox hospital has been attacked and seriously damaged. The Cardiff guardians on Saturday last resolved to remove all restrictions which have been imposed on the workhouse in view of the continued freedom of the district through another week from small-pox attacks. An additional case of small-pox has been discovered in the Forest of Dean, this time at Cinderford, the case, like the former, being a child sent to friends from Gloucester, to which place he was speedily returned. Two fresh cases arose at Swansea last week, and one death occurred. A case at Melincrythan has been removed to the Neath Rural Hospital on Cimla Common.

LITERARY INTELLIGENCE.—"Occasional Papers on Medical Subjects, 1855–1896," by W. Howship Dickinson, M.D.Camb., F.R.C.P Lond., is a work announced by Messrs. Longmans, Green, and Co. The same firm will shortly issue new editions of "Newth's Elementary Practical Chemistry" and "Watson's Elementary Practical Physics," both of which are laboratory manuals for use in organised science schools. This month Messrs. Longmans publish a new edition of "Jago's Inorganic Chemistry, Theoretic and Practical," rewritten and enlarged in accordance with the requirements of the revised Directory of the Department of Science and Art issued in 1895. Another of their announcements is "Madagascar in War Time: the Experiences of the *Times'* Special Correspondent with the Hovas during the French Invasion of 1895."—In the course of the summer Mr. J. F. Lehmann of Munich will publish a series of "Neurological Wall Diagrams" prepared by Dr. A. Strümpell and Dr. C. Jakob. The series will consist of thirteen coloured plates 80 by 110 and 160 by 220 centimetres. The first part of Dr. J. Oeller's "Atlas of Ophthalmoscopy," containing fifteen plates with English text has just been published by Mr. Bergmann of Wiesbaden. Messrs. Williams and Norgate are the English agents for both works. The Swiss National Exhibition Commissioners have published an illustrated official journal containing some fine reproductions of photographs and drawings of the exhibition buildings with engravings of the public buildings of the city. The descriptive articles are printed in the three national languages—viz., French, German, and Italian—and we understand that an English supplement is in the press. It is gratifying to find in one country four of the great families of the nations working together in good fellowship to attain a common national object.

Parliamentary Intelligence.

CURRENT NOTES.

Public Health (Scotland) Bill.

THE Committee appointed to consider this measure consists of the Duke of Richmond, the Marquis of Breadalbane, the Earl of Lauderdale, the Earl of Camperdown, Lord Balfour of Burleigh, the Marquis of Lothian, the Earl of Erroll, the Earl of Kintore, Lord Reay, Lord Tweedmouth, and Lord Overtoun.

Infant Life Protection Bill.

After this Bill (introduced by the Earl of Denbigh on behalf of the London County Council) had been read a second time in the House of Lords, their lordships determined to appoint a Special Committee and refer the Bill to it. This Committee held its first meeting on Tuesday, March 24th, when it appointed Lord Denbigh chairman, and arranged to meet after the Easter Recess for the examination of witnesses.

London Water Question.

The general policy of the Government with regard to this question was debated at length in the House of Commons on Tuesday, March 24th, in connexion with a number of transfer bills promoted by the London County Council and bills mainly for the contruction of works promoted by various of the water companies. Mr. Chaplin made the principal speech on behalf of the Government. He expressed regret that the Government should be brought so early into conflict with the great representative authority in London, but on grounds both of duty and of policy they felt compelled to oppose the bills of the County Council, while with regard to the bills of the water companies, they could only assent to their second reading on the distinct understanding that an instruction was sent to the committee limiting the works to "such as could not be postponed without detriment to the public interest." The County Council bills were rejected by the House and three of the bills of the water companies were passed through the second reading stage on this understanding. The result is to leave the way absolutely clear for the scheme of the Government.

HOUSE OF LORDS.

MONDAY, MARCH 23RD.

Insanitary Conditions at Malta.

The Earl of Buckinghamshire asked the Secretary of State for War whether any inquiry had been recently instituted into the sanitary arrangements at Pembroke Camp, at Malta; and, if so, with what result; what amount of money had been spent there on sanitary arrangements since the last outbreak of enteric fever; and to what cause were the deaths of Captain Carey, who died at Pembroke Camp on Feb. 21st, and Private Lucas, who died about the middle of February, both of them belonging to the Royal Warwickshire Regiment, attributed? The Marquis of Lansdowne replied that the last inquiry into the sanitary condition of Pembroke Camp was held by a joint civil and military committee early in 1894. This inquiry revealed grave defects in the sanitary arrangement of Pembroke Camp, the chief points requiring attention being the water-supply, which was shown to be polluted, and the drainage system, which required complete renovation. Suspicion was also cast on the supply of mineral waters and milk by hawkers to the soldiers, and the attention of the general was called to this point. In consequence of the report of the committee the polluted water-supply was cut off, and none but aqueduct water was now used. The question of renovating the drainage of the camp had proved a more difficult one, as a complete scheme for remodelling the drainage of the whole island had been under consideration, and a thorough reconstruction of the sewers of the camp could only be undertaken in connexion with it. Much had, however, been done to improve the sanitation. The remodelling of the drainage of the upper half of the camp was sanctioned in May last, and considerable progress had been made with the work. He was afraid he could not say what amount had been spent on the drainage since the last outbreak of enteric fever, and as to the deaths of Captain Carey and Private Lucas, while he had not yet received the detailed reports, there was, he believed, no doubt that enteric fever was the cause in both cases, and there was, he feared, good reason to suppose that the fever was due to the unsatisfactory sanitary condition of the island, if not of the barracks. The matter appeared to require further inquiry, and he promised that it would have his special attention.

HOUSE OF COMMONS.

THURSDAY, MARCH 19TH.

Small-pox Epidemic in Gloucester.

Mr. Radcliffe Cooke asked the President of the Local Government Board whether he was aware that an alarming outbreak of small-pox had now been raging in Gloucester for many weeks and was still on the increase? How many deaths had occurred in the course of it, and how many persons were now laid down with the disease? Whether it had been brought to his notice that small-pox was steadily increasing along the line of the Midland Railway in the direction of Stroud, Nailsworth, Frocester, and Dursley, and that small-pox was recently imported into Leominster from Gloucester? And whether any steps had been taken for the disinfection of the railway carriages on lines running out of Gloucester?—Mr. Chaplin replied: There has been a very serious outbreak of small-pox in the city of Gloucester. Altogether there have been 495 cases notified. Of these 300 are still under treatment for the disease and 93 have died. I have received communications from the Stroud and Nailsworth district councils and from the councils of Wheatenhurst and Dursley rural districts, in which Frocester and Dursley are situated, and I find that the cases in those places have been few in number, the majority thus far being isolated

attacks. I addressed a letter to the Gloucester rural district council, but have not yet received the information asked for with respect to that district. There have been 3 cases of small-pox in Leominster, but they have not been directly traced to Gloucester. The Local Government Board have no evidence that the railway carriages on the lines referred to have been infected, and they feel sure that there would be no indisposition on the part of the railway company to adopt any disinfection which the medical officer of health might recommend if it was found necessary.

FRIDAY, MARCH 20TH.

The Food and Drugs Act in Ireland.

Mr. Gerald Balfour, in reply to a question by Mr. Parnell, said that during the five years ended Dec. 31st, 1895, the number of persons proceeded against throughout Ireland, outside the Dublin metropolitan district, for selling adulterated spirituous liquors was 458, of whom 394 were convicted and 64 discharged. As evidence of the vigilance of the members of the police force who had been appointed by local authorities to carry out the provisions of the Sale of Food and Drugs Act, and whose duty it was to use every effort to detect the sale of adulterated liquors, he might mention that during the past five years the number of samples suspected to have been adulterated and submitted for analysis by the police outside Dublin was 5216, and that the number of such samples submitted for analysis in each of the five years showed a progressive increase from 514 in 1891 to 1578 in 1895. The returns made to him by the police did not show the nature of the ingredients used in the adulterations, though he believed it was probable that in many cases water only was used. In the case of Dublin prosecutions for the sale of adulterated liquors were instituted by the corporation.

Industrial School Children.

Mr. Drage asked the Secretary of State for the Home Department whether it was or had recently been the practice to employ children in the industrial schools as half timers under age, and whether there had been cases of children of the tenderest age in such schools being put to work contrary to the provisions of the Education Act?—Sir Matthew White Ridley replied: The employment of children in industrial schools cannot be compared with the employment of half-timers as regulated by the Factory and the Education Acts. The provision of industrial training in these schools is authorised by the Industrial Schools Act of 1866, and, I am advised, is not affected by the Education Acts. On this point I may refer the hon. member to Section 50 of the Education Act of 1876. I may assure him, however, that the inspectors pay special attention to the character of the employments to which young children are put, in order that as far as possible they may be suited to their age and physical condition, and that I have every reason to believe the system of mixed industrial and school training is working beneficially. The point is one to which the Committee that is now sitting will doubtless pay special attention.

MONDAY, MARCH 23RD.

Public Health.

Mr. T. W. Russell, on behalf of Mr. Chaplin, introduced a Bill "to make further provision with respect to epidemic, endemic, and infectious diseases and to repeal the Acts relating to quarantine."

Venereal Disease in the Army.

Colonel Lockwood asked the Under-Secretary of State for War whether he was in possession of facts confirming a statement from the Calcutta correspondent, which appeared in the *Times* of March 18th, that more than 3000 British soldiers were constantly in hospital from venereal disease; that the rate of admission to hospital from that cause had risen in 1895 to 511 per 1000; and that out of a force of 70,000 men only 26 000 had not suffered from it, and whether the Commander-in-Chief in India had made any representation on the subject?—Mr. Brodrick replied that the figures quoted were substantially correct and that the matter was one which had been the subject of representations at intervals by the Commander-in-Chief in India.

TUESDAY, MARCH 24TH.

The Carriage of Medicines.

Mr. A. K. Loyd asked the Secretary to the Treasury, as representing the Postmaster-General, whether, in order to save labourers in rural districts from having to walk long distances, amounting often (there and back) to ten or twelve miles, to fetch medicines for their wives or children in receipt of out-door medical relief, the Post Office could arrange for a gratuitous medicine post, by which Poor-law medical officers could send medicines to pauper patients in such districts.—Mr. Hanbury replied that there was a strict rule against sending glass by letter post, and packets containing bottles of medicine could not, therefore, be accepted for transmission as letters. The parcel post, however, was available at reasonable rates for medicines, whether in bottles or otherwise. He might also state that for the convenience of the public in urgent cases the ordinary rule prohibiting mail-cart drivers and rural postmen from carrying private parcels had been so far relaxed as to enable them to carry small packets of medicine. The Postmaster-General saw no reason why the duty of the free conveyance of medicine should be cast upon the Post Office.

Nursing in Workhouses.

Sir Walter Foster asked the President of the Local Government Board whether his attention had been called to a case of cruelty in the Whitechurch workhouse on the part of a pauper nurse, who put a child into hot water and scalded one foot badly and the other slightly; whether he would have the case investigated; and whether he was taking any steps to press on boards of guardians the importance of establishing a system of trained nursing in workhouse infirmaries and abolishing the custom of relying on paupers as nurses?—Mr. Chaplin replied: I have made inquiry respecting the case referred to and I find that in consequence of several cases of measles having occurred in the workhouse, mostly of a mild type, three inmates were directed to look after them, although under ordinary circumstances paupers are not employed to look after the sick. I am informed that on previous occasions, under similar circumstances, instructions were given by the guardians that an additional nurse should be employed. It is much to be regretted that these instructions were not carried out when these additional cases occurred. The conduct of the pauper referred to was no doubt most reprehensible, and the guardians communicated with the police with a view to its being considered whether a prosecution should not be instituted against her. I am glad to learn, however, from a certificate of the medical officer that the injuries were not of a serious character and that the child is now quite well. The board, by a circular letter issued on Jan 29th, 1895, urged upon boards of guardians the importance of appointing only trained and experienced nurses and at the same time clearly stated that, "whilst the board are not prepared to lay it down as a rule that in no case should pauper inmates act as attendants in sick wards, as clearly distinguished from nurses, they consider that their services should only be used with the approval of the medical officer and under the closest supervision at all times of paid officers." The importance of attention to these matters is urged upon the guardians by the board and their inspectors.

IN COMMITTEE.

Food Products Adulteration.

The Select Committee of the House of Commons on the adulteration of food products held a meeting on Wednesday, March 18th, Mr. T. W. Russell presiding.

Mr. John Sumner, Chief Inspector of Nuisances and Inspector under the Sale of Food and Drugs Act, Wigan, expressed the opinion that the maximum penalty of £20 was no deterrent to large dealers who were supplying margarine to the public in place of butter. He would have the maximum increased and give magistrates the power in case of persistent evasion of the Act to inflict imprisonment without the option of a fine. He was strongly in favour of a standard for milk and butter, being of opinion that it would greatly assist inspectors in the proper performance of their duties. In his view and in the view of many other provincial inspectors the inspector under the Food and Drugs Act should be appointed either by the county council or by the Local Government Board, and should change his district from time to time in order that he might not become too well known in any one district. He would have margarine of a different colour from butter, whatsoever the colour may be, while as to cheese he would have a special name for cheese that contained margarine.

Mr. Tichborne, of the Pharmaceutical Society of Ireland and the Institute of Chemistry, said that as a public analyst he had had large experience in the examination of butter and had paid special attention to the percentage of moisture in Irish butter. It was an undoubted fact that farm-made butter in the south and west of Ireland contained a very large amount of moisture, and that if a standard of 16 per cent. were set up it would drive much of that butter out of the market. The larger amount of moisture in Irish than in other butter was due to the method by which it was prepared and the want of freezing apparatus, and perhaps in a measure to carelessness. Butter made in creameries in Ireland did not, as a rule, contain so much water, but, on the other hand, it did not keep so long as the farm-made article. When foreign fats were introduced in large quantities they were easily detected, but not so when they were introduced in small quantities. Indeed, the estimation of small quantities of margarine in butter was more or less a mere matter of opinion. The difficulty with the analyst was that whatever test he might apply he did not know the original composition or fusing point. In 1895 samples of butter, chiefly taken in Dublin, were sent to him for analysis by the Tipperary Farmers' Association, and he found that of twenty there were thirteen adulterated with margarine, while of twenty-one samples sent to him in the same way last month there were only four adulterated with margarine. It was not the water that gave the Irish salt butter its great staying or keeping power, but the fact that all the animal portion which was peculiarly liable to change had been thoroughly pickled. A suggestion had been made that starch should be put into margarine, but he should prefer to have it made compulsory to introduce a certain percentage of sugar of milk which, while assisting analysis, would improve the flavour of the article and make it more palatable. He would fix a standard both for fresh and salt butter, and in his opinion the former should be 16 per cent. of moisture and the latter 20 per cent. He admitted that such a standard for salt butter might lead to the percentage of water being raised in butters which at present contained less water than Irish butter, but the standard might be revised from time to time by a board of experts.

Mr. T. H. Elliott, Secretary to the Board of Agriculture, said there was a strong feeling on the part of agriculturists throughout the country that the prices they obtained for their products were reduced by the unfair competition of adulterated foreign products, and the Board had taken steps to ascertain whether this feeling was well founded in the case of butter and cheese by taking a large number of samples of the imported products and having them analysed. As to butter, they found that of 220 samples from Holland 54 were adulterated, of 183 from Denmark 8, of 78 from Sweden none, of 21 from Norway 2, of 5 from Belgium none, of 60 from France none, of 34 from Russia 5, of 124 from Germany 37, of 51 from the United States none, of 39 from Canada none, of 18 from New Zealand none, of 53 from Australia none, and of 4 from the Argentine Republic none. The Board were anxious to take some action in regard to these adulterated samples, but they were informed by their legal advisers that the prosecution would almost certainly fail from the inability of the Board to prove intention to defraud. Samples of cheese were also taken, and in the case of adulterated samples the Board wrote in most instances to the exporters. The replies agreed in one particular—that all expressed surprise at the information that their particular product had been found to be adulterated. The Board had been met in many cases in a fair and reasonable way, and it was hoped that good would result from the action thus taken. The Board attached importance to the continuation of the system by which samples were taken at the port of arrival, although they thought nothing should be done to weaken the responsibility of the importer. They thought, in regard to the home manufacturers of margarine, that they should be registered and that their premises should be open to inspection by the officers of the Inland Revenue. They were also of opinion that the importers and wholesale manufacturers should keep a list of the persons to whom consignments were sent in order that they might be traced.

The Committee then adjourned.

The Committee held another meeting on Tuesday, March 24th, Mr. T. W. Russell presiding.

Mr. T. H. Elliott, in further examination, said that the Board of Agriculture had received communications from the Netherlands

Government inquiring as to the methods of analysis adopted at Somerset House, but not suggesting any error in the results of these methods. At the same time he believed that the cases of adulteration in Dutch butter had been strongly contested otherwise than officially. It was only in April last that the Board of Agriculture began to inspect samples at the port of entry, and although their authority for this work expired on the 31st instant, they had made application to the Treasury for an extension in order that it might be continued. In the course of communications with the Danish Government it had been suggested that the Board should make a statement as to the percentages of adulteration found, but the Board had always been reluctant to do so, because it might seem to suggest that below a certain percentage adulteration might be committed with impunity. In all these matters there was a considerable conflict of opinion among experts, and the Board was bound to rely upon the expert advisers of the Government, but he might say that they took steps in connexion with the Danish cases to bring the advisers of the two countries together in order to discuss matters and, if possible, come to a common arrangement. He wished to say that the Board had no reason to doubt the accuracy of the reports as to adulteration made to them by the chemical experts of the British Government. Obviously it was the interest of the Danish Government to see that no suspicion of adulteration attached to the exports from Denmark to this country. Certain conditions were necessary before the Board of Agriculture could detain butter at the port of entry. The goods must be marked butter, and the Government must have some information before them tending to discredit the character of the goods, and if the information was supplied by a private individual, he must give some security for the detention of the goods. In some cases the Board of Agriculture communicated to local authorities the results of the analysis of samples taken, in order that they might keep under supervision the trader to whom the adulterated article was consigned. He had no evidence of any local authority having in consequence of this action identified a consignment or instituted proceedings, and he admitted that the arrangement was not everything that could be desired.

Mr. Follit, solicitor to the Board of Customs, was the next witness. He explained that he had advised the Board that the Margarine Act gave them no power to detain at the port of entry for the purposes of examination, but that the Merchandise Marks Act did in any case where the goods were marked with a false trade description.

Mr. Thomas Fry, director of Messrs. J. S. Fry and Sons, Limited, gave evidence condemning the proposal in the bill of the Society of Public Analysts for the establishment of a board of reference, which, he said, would harass the makers of cocoa preparations and do no good to the public in this connection. His case was that so long as these mixtures were not injurious to health and were properly labelled they should not be interfered with.

Mr. Hazelwood, general manager to Messrs. Colman and Co., gave evidence of the same kind with reference to mustard mixtures.

The Committee then adjourned.

BOOKS, ETC., RECEIVED.

APPLETON, D., AND CO., New York.

Transactions of the Seventeenth Annual Meeting of the American Laryngological Association. June, 1895-96.

BERGMANN, J. F., Wiesbaden.

Klinische Beitrage zur Ohrenheilkunde. Von Dr. O. Brieger, 1896.

Das Horvermögen des Taubstummen. Von Dr. F. Bezold. 1896.

Die Ohrenheilkunde des Hippokrates. Von Dr. O. Körner. 1896.

CHATTO AND WINDUS, Piccadilly, London, W.

Moorland Idylls. By Grant Allen. 1896. Price 6s.

CLAY, WM. F., Teviot-place, Edinburgh.

The Histo-pathology of the Diseases of the Skin. By Dr. P. G. Unna. Translated from the German by N. Walker, M.D., F.R.C.P. Edin. Illustrated. 1896. Price 31s. 6d. net.

FUNK AND WAGNALLS COMPANY, London and Toronto.

Youthful Eccentricity: A Precursor of Crime. By Forbes Winslow, D.C.L. Oxon., M.B. Cantab. 1895. Price 2s.

KEGAN PAUL, TRENCH, AND CO., Charing-cross-road, London, W.C.

Mediterranean Winter Resorts, with special Articles on the principal Invalid Stations by Resident English Physicians. By Eustace A. Reynolds-Ball, F.R.G.S. With a map. Third edition. 1896. Price 5s.

LEWIS, H. K., Gower-street, London, W.C.

Researches into the Anatomy and Pathology of the Eye. By E. Treacher Collins, F.R.C.S. Illustrated. 1896. Price 6s.

LONGMANS, GREEN, AND CO., Paternoster-row, London, E.C.

The Glaciers of the Alps. By John Tyndall, F.R.S. Illustrated. New Edition. 1896.

Fear. By Angelo Mosso. Translated from the fifth edition of the Italian by E. Lough and F. Kiesow. 1896. Price 7s. 6d.

MACMILLAN AND CO., Bedford-street, London, W.C.

Text-book of Comparative Anatomy. By Dr. Arnold Lang. Translated into English by H. M. Bernard, M.A. Cantab., and Matilda Bernard. Part 2. 1896. Price 17s. net.

SAUNDERS, W. B., Walnut-street, Philadelphia.

A Text-book upon the Pathogenic Bacteria for Students of Medicine and Physicians. By J. McFarland, M.D. Illustrated. 1896.

SKEFFINGTON AND SON, Piccadilly, London, W.

My Doctors. By a Patient. Tenth edition. 1896. Price 1s.

SMITH, ELDER, AND CO., Waterloo-place, London, S.W.

Dictionary of National Biography. Edited by Sidney Lee. Vol. XLVI. Pocock—Puckering. 1896.

THE F. A. DAVIS COMPANY, Philadelphia.

Colour-vision and Colour-blindness: a Practical Manual for Railroad Surgeons. By J. Ellis Jennings, M.D. Illustrated. 1896.

THE REHMAN PUBLISHING COMPANY, Adam-street, Strand, London, W.C.

A Pictorial Atlas of Skin Diseases and Syphilitic Affections. Edited by J. J. Pringle, M.R., F.R.C.P. Part III. 1896. Price 10s. 6d.

Water and Water-supplies. By J. C. Thresh, D.Sc. Lond., M.B. Victoria, D.P.H. Camb. 1896. Price 8s.

THE ROXBURGHE PRESS, Victoria-street, Westminster, S.W.

Love Fugue. By John B. Frost. Price 2s.

THE W. J. JOHNSTON COMPANY, Broadway, New York.

Elementary Electro-technical Series: Electricity in Electro-Therapeutics. By E. J. Houston, Ph.D., and A. E. Kennelly, Sc.D. 1896.

WRIGHT, J., and Co., Stonebridge, Bristol.

The Medical Annual and Practitioner's Index for 1896. Fourteenth year. Price 7s. 6d. net.

The Register of Trained Nurses of the Royal British Nurses' Association for 1896 (Offices, 17, Old Cavendish-street, London, W.); price 3s. 6d.—Science Progress; March, 1896 (The Scientific Press, 428, Strand, London, W.C.); price 2s. 6d.—Annales de la Société Royale des Sciences Médicales et Naturelles de Bruxelles; Tome 5, Fasc. 1-2 (Henri Lamertin, Bruxelles, 1896).—Proceedings of the Philosophical Society of Glasgow, 1894-95; vol. 26 (J. Smith and Son, Glasgow, 1895); price 10s. 6d.—Transactions of the American Ophthalmological Society: thirty-first annual meeting, New London, Conn., 1895 (published by the Society, Hartford, 1896).—Leçons de Clinique Médicale (Hôtel Dieu, 1894-95); par Dr. Pierre Marie (Masson et Cie, Paris), 1896.—Les Artérites: leur Rôle en Pathologie; par A. Brault (G. Masson, Paris).—Diphtheria Antitoxin and other Biological Products; illustrated. Gebier's Double Antitoxin (new) for Malignant Diphtheria; Tetanus and Streptococcus Antitoxins (Lehu and Fink, New York City).—Which is the Purest Spirit? with some Account of a Famous Gin Distillery; illustrated (Sutton Sharpe and Co., Queen Victoria-street, London, E.C.).—Royal University of Ireland: the Calendar for the Year 1896 (Alex. Thom and Co., Dublin).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADDENBROOKE, E. H., M.R.C.S., has been reappointed Medical Officer of Health for the Wolverley Sanitary District.

BLAXLAND, HERBERT, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Deputy-Inspector-General of the Insane, New South Wales.

BLOXSOME, C. H., L.R.C.P., L.R.C.S. Edin., has been reappointed Honorary Surgeon to the Fairford Cottage Hospital.

BUXTON, T., L.R.C.P. Edin., M.R.C.S., has been reappointed Vaccination Officer for Kingsbury, Tamworth Union.

CHEPMELL, C. W. J., M.D. Brux., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., M.R.C.S., has been reappointed Honorary Medical Officer to the Brighton and Hove Hospital for Women and Children, Brighton.

CILLIERS, P. G., M.B., C.M., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

CREAGH, WM., L.R.C.S. Irel., has been reappointed Vaccination Officer for Clifton, Tamworth Union.

CUNLIFFE, THOMAS VARLEY, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Manchester Southern Hospital for Women and Children.

DALTON, J. H. C., M.D., B.C., D.P.H. Camb., has been appointed Honorary Deputy Medical Officer by the Cambridge Town Council.

DUNCAN, W., L.F.P.S. Glasg., has been appointed Medical Officer to the Lunatic Department of the Union Infirmary by the Belfast Board of Guardians.

FAWSSETT, F., M.B., B.S. Lond., L.R.C.P., M.R.C.S., has been appointed District Medical Officer by the Lewes Board of Guardians.

FURNER, E. J., F.R.C.S., has been reappointed Honorary Medical Officer to the Brighton and Hove Hospital for Women and Children, Brighton.

GIFFARD, D. W., M.R.C.S., has been reappointed Honorary Medical Officer to the Brighton and Hove Hospital for Women and Children, Brighton.

HALL, C. B., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Chelsea Hospital for Women.

HORTON, F., M.B. Durh., B.S., L.R.C.P. Lond., M.R.C.S., of Torquay, has been appointed Local Certifying Surgeon under the Factories Act, vice Cook, resigned.

HOUNSFIELD, S. C., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Second House Surgeon to the East Suffolk Hospital, Ipswich.

HUGHES, R. F., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer at the Birkenhead Workhouse.

ILES, D., M.R.C.S., has been reappointed Honorary Surgeon to the Fairford Cottage Hospital.

IONIDES, T. H., M.B., B.S. Lond., F.R.C.S., L.R.C.P., has been re-appointed Honorary Medical Officer to the Brighton and Hove Hospital for Women and Children, Brighton.

JACOMB-HOOD, C. H., L.R.C.P. Lond., M.R.C.S., has been reappointed Honorary Medical Officer to the Brighton and Hove Hospital for Women and Children, Brighton.

JEFFERSON, A. J., M.D. Lond., B.S., M.R.C.S., has been appointed Honorary Medical Officer to the Rochdale Infirmary.

JONES, J. ARNAULT, L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health by the Aberavon Town Council.

JONES, F. F., M.R.C.S., D.P.H. Eng., has been appointed Medical Officer of Health by the Llanfyllin Rural District Council.

KERR, W. J., M.D. Vict., Ch.B., L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Medical Officer to the Rochdale Infirmary.

KERR, W. J., M.D., Ch.B. Vict., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Honorary Surgeon to the Rochdale Infirmary, vice Colley March.

KNOX, J. J., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the East and West Molesey Urban District Council.

MEADOWS, G., M.B., C.M. Edin., has been appointed Medical Officer for the Fourth Sanitary District of the St. Germans Union, vice R. C. Revell, deceased.

MUNRO, A. C., M.B., B.Sc., D.Sc. (Public Health), M.R.C.P. Edin., has been appointed Medical Officer for the Burgh, Glasgow.

MURRAY, ALLAN, has been reappointed Agricultural Analyst under the Fertilisers and Feeding Stuffs Act, 1893, by the Merioneth County Council.

RUSSELL, J. RISIEN, M.D. Edin., M.R.C.P. Lond., has been appointed Pathologist to the National Hospital for the Paralysed and Epileptic, vice Colman, appointed Assistant Physician.

SANDERSON, R., M.B., B.Ch. Oxon., M.R.C.S., has been reappointed Honorary Medical Officer to the Brighton and Hove Hospital for Women and Children, Brighton.

SELLERS, A. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Thornhill Urban District Council.

STEWART, J. H., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer of Health for the Borough of Lostwithiel.

WALKER, G. E., L.R.C.P. Lond., M.R.C.S., D.P.H. Camb., has been appointed Governor of the Female Convict Prison at Aylesbury.

WEBB, C. F., M.D. Durh., F.R.C.P., F.R.C.S. Edin., M.R.C.S., has been reappointed Medical Officer of Health by the Basingstoke Town Council.

WINTER, J. N., M.R.C.S., has been reappointed Honorary Medical Officer to the Brighton and Hove Hospital for Women and Children, Brighton.

WORGER, T. H., M.R.C.S., has been reappointed Medical Officer by the Radstock District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £50, with board and washing.

BETHLEM HOSPITAL.—Two resident Clinical Assistants, for six months. Apartments, board, and washing provided. Applications to the Clerk, Bridewell Hospital, New Bridge-street, E.C.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Surgeon to In-patients.

CHICHESTER INFIRMARY.—Honorary Medical Officer.

CITY OF BIRMINGHAM.—Deputy Medical Superintendent for the City Hospital, Little Bromwich, unmarried. Salary £175 per annum, with residence, rations, and attendance. Applications to the Clerk to the Health Committee, Council House, Birmingham.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Assistant Physician. Also Pathologist. Salary 100 guineas per annum.

COUNTY ASYLUM, Lancaster.—Assistant Medical Officer for five or six months. Salary two guineas per week, with board, &c.

DR. STEEVENS' HOSPITAL, Dublin.—House Surgeon for two years. Salary £100 per annum, with apartments, fire, and light.

DUNDEE ROYAL LUNATIC ASYLUM.—Assistant Medical Officer. Salary £100 a year, with board, lodging, &c.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Four qualified Clinical Assistants and eight unqualified Clinical Clerks in the Out-patient Department.

GENERAL INFIRMARY, Northampton.—Resident Dressership. Board, lodging, and washing provided.

HEREFORD COUNTY AND CITY ASYLUM.—Medical Superintendent. Salary £400 per annum, with furnished house, coals, gas, vegetables, and washing. Applications to Chairman, Asylum Committee, Shirehall, Hereford.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—House Physicians. Also Clinical Assistants to the Out-patient Department and Clinical Clerks to the In-patient Physicians.

KESTEVEN AND GRANTHAM DISTRICT ASYLUM.—Resident Medical Superintendent. Salary £300 a year, with rations, coals, light, and washing. Applications to the Clerk to the Visitors, Stamford.

MANCHESTER ROYAL EYE HOSPITAL.—House Surgeon. Salary £70 per annum, with residence, board, and washing.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer for six months. Salary £30 per annum, with board, attendance, and washing.

NATIONAL DENTAL HOSPITAL, Great Portland-street, W.—Anæsthetist.

NEW HOSPITAL FOR WOMEN, 144, Euston-road, London.—Medical Woman as Clinical Assistant in the Out-patient Department for one year. Also Medical Woman as Assistant Anæsthetist for one year.

PADDINGTON-GREEN CHILDREN'S HOSPITAL, W.—House Physician and House Surgeon for six months. Salary at the rate of £50 per annum, board and residence.

PARISH OF BIRMINGHAM.—Resident Medical Officer for the Workhouse Infirmary. Salary £100 per annum, with furnished apartments, rations (which do not include alcoholic liquors), coals, gas, washing, and attendance. Applications to Clerk to the Guardians, Parish Offices, Edmund-street, Birmingham.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon, for six months. Board, lodging, and washing provided.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Resident Medical Officer for six months. Salary at the rate of £100 per annum, with furnished apartments, board, and washing.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Bacteriologist.

SUNDERLAND INFIRMARY.—House Surgeon. Salary £80, rising £10 annually to £100, with board and residence.

WANDSWORTH AND CLAPHAM UNION INFIRMARY, St. John's-hill, near Clapham Junction.—Junior Assistant Medical Officer for twelve months. Board, lodging, and washing provided, and £35 at end of each six months.

WORCESTER GENERAL INFIRMARY.—Assistant House Surgeon and Dispenser, unmarried, for two years. Salary £70 per annum, with board, residence, and washing.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £150 a year, with furnished apartments, coals, and gas.

Births, Marriages, and Deaths.

BIRTHS.

BURGHARD.—On March 20th, at 46, Weymouth-street, Portland-place, W., the wife of Frederic F. Burghard, M.S. Lond., F.R.C.S., of a son (stillborn).

MOORE.—On March 24th, at The Dene, Dartford, Kent, the wife of S. J. Moore, M.D. Irel., of a son.

PATTERSON.—On March 21st, at 40, Highbury-place, N., the wife of Charles S. Patterson, M.B., M.R.C.S., of a son.

ROYDEN.—On March 21st, at Burgh St. Margarets, Great Yarmouth, the wife of William Royden, M.A. Cantab., M.R.C.S., L.R.C.P., of a daughter.

SMALLPEICE.—On March 23rd, Cicely, wife of Donald Smallpeice, L.R.C.P. Lond., of a son.

USHER.—On March 24th, at Hazlemere, Thorney Hedge-road, Gunnersbury, the wife of T. S. Usher, M.D., St. And., of a daughter.

WHITEHALL-COOKE.—On March 22nd, at Willesden-green, the wife of Cecil Whitehall-Cooke, M.D. Lond., M.R.C.S., L.R.C.P., of a son.

WOOLLERTON.—On March 21st, at Wendover, the wife of E. G. Woollerton, Surgeon, of a son.

MARRIAGES.

ABRAHAMS—SIMMONS.—On March 18th, by the Very Rev. the Chief Rabbi, assisted by the Revs. J. Samuel and R. Harris, Bertram Louis Abrahams, M.B., B.Sc., M.R.C.P., of 14, Welbeck-street, W., son of L. B. Abrahams, Esq., B.A., to Jane, daughter of A. J. Simmons, Esq., of 41, Gordon-square.

LINDSEY—COATES.—On March 24th, at St. Pancras Church, London, by the Rev. Chas. C. Bell, Alexandra Lindsey, M.D., M.Ch., M.A.O.R.U.I., of Burslem, Staffordshire, to Annie Martha, only daughter of the late Frederick Coates, Esq., of St. John, Hertford.

DEATHS.

HENDLEY.—On March 17th, at his residence, The Croft, Wallingford, Berks, after a very short illness, John Hendley, Surgeon-General, C.B., aged 68.

NISBETT.—On March 18th, at his residence, Overcliffe, Gravesend, Robert Innes Nisbett, M.R.C.S. Eng., L.S.A., in his 70th year.

WILLANS.—On March 17th, at Mentone, William Henry Willans, L.R.C.P. Lond., M.R.C.S. Eng., aged 51.

WILSON.—On March 22nd, at The Cedars, Kenninghall, Norfolk, Joseph Henry Wilson, M.R.C.S. Eng., aged 43.

WYNNE-JONES.—On March 20th, at 53, Port-hill-road, Shrewsbury, Thomas Joseph Wynne-Jones, L.R.C.P., L.R.C.S., &c., late of Murivance House, Shrewsbury, and of Heslingham, Southborough, Tunbridge Wells, aged 38.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 26th, 1896.

Date.	Barometer reduced to Sea Level and 32° F	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Maximum Temp. Shade	Min. Temp	Rainfall	Remarks at 8.30 A.M.
Mar. 20	29·93	S.W.	47	45	74	51	39	...	Cloudy
,, 21	29·77	S.W.	50	49	78	57	47	0·34	Raining
,, 22	29·95	S.W.	57	54	100	66	50	0·04	Cloudy
,, 23	30·02	S.W.	49	48	92	62	48	...	Foggy
,, 24	29·87	W.	51	48	92	65	48	...	Cloudy
,, 25	29·70	S.W.	54	52	102	63	51	...	Cloudy
,, 26	29·69	N.W.	48	47	88	52	47	0·01	Cloudy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second half-yearly volume for 1895 was given in the issue of Dec. 28th. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

MEDICAL ADVERTISING.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 7th you give it as your opinion that it is wrong on the part of Dr. Riley to advertise a book on sterility in the female in the lay press. If this be so, is it right that Dr. Lionel Beale, a censor of the College of Physicians of London, should advertise, as he does extensively and has done for many years, in the lay press his book "On Our Morality and the Moral Question"? What is sauce for the goose is usually regarded as sauce for the gander.

I am, Sirs, yours faithfully,

Glasgow, March 7th, 1896. D. CAMPBELL BLACK.

A NECESSARY CONTRADICTION.

To the Editors of THE LANCET.

SIRS,—Reports having been spread abroad that I am about to leave this place on account of bad health, will you kindly allow me, through the medium of THE LANCET, to give them an emphatic contradiction. I have been ill, but am very much better, and have not the slightest intention of parting with my practice. Your insertion of this may save would-be possessors of "dead men's shoes" some trouble. Perhaps you will kindly tell me if it would be considered unprofessional to send a similar contradiction to the local papers. Thanking you in anticipation, I am, Sirs, yours truly,

JOHN P. BALBIRNIE.

Stanley Bank, Staveley, near Kendal, March 25th, 1896.

*** If our correspondent's alleged intention to give up practice has been made public to his detriment, he will certainly be justified in giving the report once and for all an equally public contradiction.—ED. L.

Mr. J. Wilson.—The medical profession recognises the system, but cannot found an institute without Government or lay support.

AMBULANCE LECTURES AND MEDICAL ADVERTISEMENTS.

WE have received an account of a presentation to a medical man from his ambulance class. The fact of the presentation is gratifying but we think it a pity that the whole proceedings should be published at large in the lay press. The correspondent who sends us the cutting says, "Will you kindly publish the enclosed in the next issue of THE LANCET. We think it may do some good to the doctor who, we think, deserves to have it published as much as possible." We thank him for his kindly, if mistaken, feeling; we publish presentations, but merely the fact of their having taken place, so we are unable to accede to his request.

Mr. J. B. Thomas.—We cannot differentiate between the values of medical degrees accepted by the General Medical Council as qualifications. Our correspondent is recommended to consult the teachers at his school as to the advisability of acquiring this or that degree.

BEEF AND MALT WINE AND ANTISEPTIC SCISSORS.

THE connexion may seem puzzling to those of our readers—we hope the great majority—who have not done anything of the kind indicated in the remarkable circular below to have carried a pair of antiseptic scissors. When will some dealers in medical foods learn to treat the profession with respect?

> "Dear Sir,—We have much pleasure in asking you to accept a pair of aseptic scissors which we have had specially made for us in pocket size. At the same time we wish to thank you for your recommendations of '———'s Beef and Malt Wine,' and to add that our anxiety is to procure a high-class, nourishing wine, upon which medical men can rely and prescribe with confidence.
>
> "Yours truly,
>
> "———."

A CORRESPONDENT sends us the following story from the *Church Times*. "If not strictly medical," he says, "it is at least dietetic."

> "A missionary in his report to his bishop wrote: 'I much regret that my flock are still addicted to cannibalism, but, thanks to my example and precept, they are becoming so far civilised that the use of knives and forks is becoming quite common.'"

THE NEW PHOTOGRAPHY.

THE not too novel saying that nothing is new under the sun has been remarkably illustrated in a way by the new photography. In its application and in its establishment upon a scientific basis the process of Professor Roentgen is absolutely new; as an idea present to the philosophic and imaginative mind it is quite old. We recently pointed out that many years ago a Scotch man of letters had prophesied the discovery, and also its possible uses as an adjunct to medical diagnosis. Mr. Egerton Castle, F.S.A., has recently lent us an old book where the similarity between the fantastic thought of the author and the real fact of to-day is very striking. The book is entitled "Lettres Odiques—Magnetiques," and is a French translation from the German of the Chevalier de Reichenbach. It is a mystical little collection of thoughts on animal magnetism and wild speculations on "Odic" force, but in several places the luminosity and *transparency* of certain objects under electrical conditions which are opaque to the ordinary gaze is dwelt upon as an established physical phenomenon. The book, however, is speculative, not scientific.

Mr. H. Smith of Hemel Hempstead sends us a remarkable extract from an article which appeared in the *Family Herald* of Aug. 1st, 1846, concerning a machine named by its inventor, a Greek *savant*, the "anthroposcope":—

> "At a late meeting of the Paris Academy of Sciences," the extract runs, "an extraordinary communication was made by a Greek physiologist, M. Eseltja, who asserts that by the assistance of electric light he has been enabled to see through the human body and thus to detect the existence of deep-seated visceral disease. He has followed the operations of digestion and of circulation and has seen the nerves in motion. M. Eseltja has given the name of 'Anthroposcope' to his remarkable discovery."

What the anthroposcope was beggars imagination. In spite of the allusion to electric light—not a term in 1846 having the same meaning that it has half a century later—it is certain that the inventive Greek had not blundered upon the Roentgen rays. It would be interesting to learn if the Paris Academy of Sciences knows aught now of Mr. Eseltja and his anthroposcope.

Mr. J. Hall Edwards.—We cannot see any objection to a medical man, skilled in recent photography, devoting himself to the application of it in medical and surgical cases and announcing to medical men his intention of doing so through the ordinary channels. Of course, we assume that he entirely dissociates himself from any treatment of the case and works only at the instance of the practitioner in attendance. We understand these to be the limitations imposed on himself by our correspondent.

SINGULAR ACTION AGAINST AN AMERICAN SURGEON.

Dr. BENJAMIN THOMPSON mentions in a recent number of the *Chicago Railway Surgeon* that twelve years ago a railway servant was brought to him with an injury of the left hand, the thumb, index, and middle fingers of which were crushed to a pulp. The man thought that his fingers might be saved, but it was explained to him that this was hopeless, and he ultimately agreed that the surgeon should make a thorough examination under an anæsthetic and do what seemed to be best. The injured portions were duly removed and the patient made a good recovery but a year afterwards he brought an action against the surgeon for $7000 damages for wantonly mutilating him. The case was delayed for several terms of court, the man dying before it was tried, and Dr. Thompson ultimately had a judgment rendered against the deceased for the costs.

THE GEORGE AUGUSTUS SALA MEMORIAL FUND.

AT an influential meeting held on March 25th, at Hampden House, under the presidency of his Grace the Duke of Abercorn, it was decided to raise a memorial fund in recognition of Mr. Sala's long and distinguished journalistic work. A committee has been formed of the following gentlemen:—the Duke of Abercorn, the Duke of Fife, Lord Dufferin, Lord Rosebery, Lord Glenesk, Sir Walter Besant, Sir A. Otway, Sir D Straight, Sir H. de Bathe, Sir D. Salamans, Sir Augustus Harris, Sir C. Dilke, Sir G. Newnes, Sir H. Gilzean Reid, Sir B. W. Richardson, Sir H. B. Poland, Q.C., Sir Somers Vine, Sir R. Quain, Hon. Alg. Bourke, Count Hollander, Messrs. J. L. Toole, Wm. Black, Geo. Alexander, Wellesley Hammond, A. Goodchild, Chas. Morton, Fredk. Gordon, Tom Bird, John Leighton, T. P. O'Connor, M.P., J. S. Wood, A. J. Warden, A. P. Watt, John Hollingshead, A. Beyfus, Hon. W. F. D. Smith, Horne Payne, G. Edwards, E. Routledge, Walter Weblyn. Of this number the following have consented to act as an executive committee:—Sir Douglas Straight, Sir Somers Vine, Messrs. W. Hammond, A. Beyfus, John Hollingshead and J. S. Wood. Subscriptions are invited for the fund, and cheques may be forwarded to the Duke of Abercorn, hon. treasurer, and receipts will be acknowledged by Mr. W. G. Thistle, 6, Gloucester-road, hon. secretary to the fund.

COMPULSORY ATTENDANCE AND ILLNESSES OF EMERGENCY.

A CORRESPONDENT of the *Bradford Telegraph* is very much concerned because three medical men refused to attend at the summons of the police on a lady attacked in the road with apoplexy. It is a much more common experience to find three medical men in prompt attendance and perhaps none of them paid for it. Will this indignant gentleman, who signs himself an "Eye Witness," take the whole of the subject into his consideration instead of basing an argument for unjust compulsory attendance on a single instance given without the particulars necessary for a sound judgment.

TRULY WONDERFUL—IF TRUE!

A CORRESPONDENT writes:—

> "Marvellous stories crop up from time to time of inconceivable persistence of vitality; live creatures of even long bygone ages have been imprisoned in the earth and have resumed life and activity on being disinterred. One of the latest and most circumstantial of these is related in all good faith and at first hand by Lieutenant-Colonel Andrew Haggard, D.S.O., in his recent book 'Crescent and Star' (Blackwood, 1895), wherein he describes his career in the Egyptian campaigns of 1882–85. On p. 300 he says that—'In January, 1885, as a soldier at Suakim was breaking coral rock with a pickaxe to make a ditch to a redoubt what looked like a fossil whelk shell fell out from the interior.' The author picked it up, found it covered with white lime, and concluded that it was the fossil of a hermit crab in a whelk shell. While carrying it about some ten minutes later he 'felt a tickling in the palm of the hand and then a slight nip. On looking at it, lo and behold! the crab had pushed out an antenna and a claw and was not a fossil at all, but alive and well after thousands of years of imprisonment in that coral rock.' The existence of the living hermit crab was attested by many people. The animal was set free afterwards in the sea."

Surely Lieutenant-Colonel Andrew Haggard would have out-Haggarded Mr. Rider Haggard if this had been an invention and not a record of an actual occurrence. Our correspondent continues:—

> "The author truly says, 'My thus finding a hermit crab alive in a rock is on a par with the toads which have been found in coal mines, and is equally extraordinary.' I should say that all these stories properly belong to the region of mythology. Nature is not above playing sundry pranks on her creatures, and feats of legerdemain which perhaps cannot always be easily explained are not beyond her powers."

"PROTEST AGAINST THE INJUSTICE OF THE MEDICAL AUTHORITIES."

WE have received a long letter from Dr. Beattie Crozier in reference to our annotation of last week upon his circular notice. Pressure on our space prevents us from printing it this week.

THE POISON OF THE PRIMULA.

WE have had forwarded to us some correspondence which would lead to the supposition that the popular and beautiful primula secretes, at any rate in some of its varieties, an extremely virulent juice. A story of erysipelas-like attacks of face and hands with subsequent desquamation—the attack possibly being dependent upon much handling of certain primulas—was confirmed in one of the horticultural papers (*Gardening Illustrated*, March 7th, 1896) by more than one correspondent, and in a categorical sort of way that would seem to show that the sufferers had really guessed the cause of their troubles. We should like to hear from any of our readers who indulge in practical gardening if they have ever experienced any cutaneous trouble while potting or repotting primulas, or to learn if anyone has had under his care a patient so suffering. An annotation upon the subject, where the offending plant was primula obconica, appeared in THE LANCET of Sept. 20th, 1890.

ERRATUM.—In our annotation of March 21st concerning the Church of St. Bartholomew the Great, the address of the rector—the Rev. Sir Borro'aile Savory—was wrongly printed as 12, King-street-chambers, West Smithfield, the number should have been 20.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (31st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (1st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross, (3 P.M.), St Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (2nd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY (4th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (30th).—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Prof. Sylvanus Thompson: Demonstration of the Roentgen Process.

WEDNESDAY (1st).—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens by Dr. Duncan, Dr Spencer, Dr. Galabin and others. Papers:—Mr. J. Rutherford Morison (communicated by Mr. A. Doran): Case of Deciduoma Malignum occurring in England.—Dr. H. R. Spencer: Case of Deciduoma Malignum.—Dr. T. W. Eden: Deciduoma Malignum; a Criticism.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

WEDNESDAY (1st).—WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Seymour Taylor: Cases of Difficult Diagnosis.

During the week marked copies of the following newspapers have been received:—*Glasgow Evening News, Leicester Daily Post, Gloucester Journal, Scotsman, Craven Herald, Slough Observer, Preston Guardian, Liverpool Daily Post, Builder, Royal Cornwall Gazette, Times of India, Liverpool Courier, Yorkshire Post, Leigh Chronicle, Manchester Guardian, Derby Express, Pioneer Mail, Sheffield Telegraph, Leeds Mercury, Dundee Advertiser, Architect, South London Press, Newcastle Chronicle, Hampshire Independent, Birmingham Gazette, Bristol Mercury, Irish News, Bradford Observer, Bury Guardian, Leyton Independent, Brighton Argus, Western Morning News, Sanitary Record, Hertfordshire Mercury, Mining Journal, Daily Chronicle, Reading Mercury, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Wigan Observer, Evening Telegraph (Dundee), City Press, Gloucestershire Chronicle, Local Government Journal, Surrey Advertiser, Buchan Observer, Ayr Observer, Shrewsbury Chronicle, Lincolnshire Echo, Newark Advertiser, Banffshire Advertiser, Birmingham Daily Post, Le Courrier de la Presse, West Britain Advertiser, Kentish Mercury, Warwickshire Times, Exeter Flying Post, Southampton Times, Medical Record (New York), The Press (Christchurch, New Zealand), &c., &c.**

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